

SEARCH REQUEST FORM

Scientific and Technical Information Center

Access DB#

Requester's Full Name: MOLLY CEPERLEY Examiner #: 59757 Date: 02/20/04
 Art Unit: 1641 Phone Number 301-272-0813 Serial Number: 10/053,612
 Mail Box and Bldg/Room Location: REM 3A51 Results Format Preferred (circle): PAPER DISK E-MAIL
 ↳ REM 3C70

If more than one search is submitted, please prioritize searches in order of need.

 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

Earliest Priority Filing Date: 05/01/00

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

- ① Please search for:
 (Sn²⁺) stannous AND Manganese, Technetium or Rhenium
 (prefer Sn Cl₂) (Mn, Tc, Re: see isotopes of claim 27)

- ② If you get hits, please also search for ① in combination with any of the terms: lyophilize, lactose, pyrophosphate, glucopate, aminopolycarboxylate (see claims 27 and 29-32), bidentate ligand, tridentate ligand, or ~~permetallate~~ ~~permetate~~ permetallate. (See page 8.)

Please do not limit search to the method of use defined in claim 27.

STAFF USE ONLY

STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher: _____	NA Sequence (#) _____	STN <u>550</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up: <u>2/27</u>	Bibliographic _____	Dr. Link _____
Date Completed: <u>2/27</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>20</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>30</u>	Other _____	Other (specify) _____

* Paul Schulwitz please. Please return all attachments with search results. Thanks.

114825

RECEIVED

Access DB#

SEARCH REQUEST FORM

Scientific and Technical Information Center

131101

Requester's Full Name: MOLLY CUPERLEY Examiner #: 59759 Date: 02/20/04
Art Unit: 1641 Phone Number 301-272-0813 Serial Number: 10/053,612
Mail Box and Bldg/Room Location: REM 3A51 Results Format Preferred (circle): PAPER DISK E-MAIL
↳ REM 3C70

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

Earliest Priority Filing Date: 05/01/00

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

- ① Please search for:
(Sn^{2+})
stannous AND Manganese, Technetium or Rhenium
(prefer $SnCl_2$) (Mn, Te, Re : see isotopes of claim 27)

- ② If you get hits, please also search for ① in combination with any of the terms: lyophilize, lactose, pyrophosphate, glucopite, aminopolycarboxylate (see claims 27 and 29-32), bidentate ligand, tridentate ligand, or ~~permetallate~~ ~~permetate~~ permetallate. (See page 8.)

Please do not limit search to the method of use defined in claim 27.

STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: _____	NA Sequence (#) _____	STN <u>550</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up: <u>2/27</u>	Bibliographic _____	Dr. Link _____
Date Completed: <u>2/27</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>20</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>30</u>	Other _____	Other (specify) _____

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L6 1 SEA FILE=REGISTRY ABB=ON PLU=ON TIN/CN
 L7 2 SEA FILE=REGISTRY ABB=ON PLU=ON "TIN CHLORIDE"/CN
 L8 1 SEA FILE=REGISTRY ABB=ON PLU=ON TIN BROMIDE/CN
 L9 1 SEA FILE=REGISTRY ABB=ON PLU=ON "TIN DIBROMIDE"/CN
 L10 8 SEA FILE=REGISTRY ABB=ON PLU=ON TIN DICHLORIDE?/CN
 L11 2 SEA FILE=REGISTRY ABB=ON PLU=ON TIN DIBROMIDE?/CN
 L12 1 SEA FILE=REGISTRY ABB=ON PLU=ON TIN DIFLUORIDE?/CN
 L13 1 SEA FILE=REGISTRY ABB=ON PLU=ON TIN DIIODIDE?/CN
 L14 1 SEA FILE=REGISTRY ABB=ON PLU=ON MANGANESE/CN
 L15 4816 SEA FILE=REGISTRY ABB=ON PLU=ON TECHNETIUM?/CN
 L16 1928 SEA FILE=REGISTRY ABB=ON PLU=ON TECHNETATE?/CN
 L17 4 SEA FILE=REGISTRY ABB=ON PLU=ON 14133-76-7 OR 7439-96-5 OR
 14378-26-8 OR 14998-63-1
 L18 95232 SEA FILE=HCAPLUS ABB=ON PLU=ON (L6 OR L7 OR L8 OR L9 OR L10
 OR L11 OR L12 OR L13)
 L19 180434 SEA FILE=HCAPLUS ABB=ON PLU=ON (L14 OR L15 OR L16 OR L17)
 L20 13577 SEA FILE=HCAPLUS ABB=ON PLU=ON L18 AND L19
 L22 32251 SEA FILE=HCAPLUS ABB=ON PLU=ON LIGANDS+NT/CT
 L26 265 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 AND (LYOPHIL? OR PYROPHOS?
 OR GLUCEPTAT? OR AMINOPOLYCARBOX? OR GLUCOHEPT? OR MULTIDENT?
 OR BIDENT? OR TRIDENT?)
 L27 13 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 AND L22
 L28 41 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 AND LIGAND
 L29 47 SEA FILE=HCAPLUS ABB=ON PLU=ON L27 OR L28

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L29 ANSWER 1 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:20790 HCAPLUS

DOCUMENT NUMBER: 140:78862

TITLE: Disinfecting compositions containing chelating metal complex

INVENTOR(S): Polyakov, Victor S.; Ermilov, Valeriy V.; Kuzmin, Vladimir S.; Lukashov, Oleg Ivanovich; Rzucidlo, Eugene C.

PATENT ASSIGNEE(S): Veckis Industries, Ltd., Liechtenstein

SOURCE: PCT Int. Appl., 33 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004003121	A1	20040108	WO 2003-US20349	20030627
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,				

CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,
NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG

US 2004033916 A1 20040219 US 2002-185024 20020628

PRIORITY APPLN. INFO.: US 2002-185024 A 20020628

AB Title compns. comprise a chelating metal complex compd. with a monodentate **bidentate** or polydentate **ligand**, which exhibits affinity to hydrogen ion, an ionogenic surfactant, and a solvent. The prepn. displays antiseptic properties and effectiveness of the content. The prepn. affects gram pos. and gram neg. bacteria, viruses, spores. The prepn. can be applied in a broad temp. interval.

IC ICM C11D001-62

ICS C11D003-26; C11D003-43; C11D003-44

CC 46-6 (Surface Active Agents and Detergents)

IT Antibacterial agents

Complexing agents

Disinfectants

(disinfecting compns. contg. chelating metal complex)

IT 7429-90-5, Aluminum, uses 7439-92-1, Lead, uses **7439-96-5**, Manganese, uses 7439-97-6, Mercury, uses 7440-02-0, Nickel, uses 7440-06-4, Platinum, uses **7440-31-5**, Tin, uses 7440-32-6, Titanium, uses 7440-38-2, Arsenic, uses 7440-43-9, Cadmium, uses 7440-47-3, Chromium, uses 7440-48-4, Cobalt, uses 7440-57-5, Gold, uses 7782-49-2, Selenium, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(complexes with chelating agents; disinfecting compns. contg. chelating metal complex)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 2 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:892652 HCAPLUS

DOCUMENT NUMBER: 139:369675

TITLE: Radiopharmaceutical formulations

INVENTOR(S): Chen, Jiaqing; Linder, Karen; Wang, Nannan

PATENT ASSIGNEE(S): Bracco Imaging S.p.A., Italy

SOURCE: PCT Int. Appl., 50 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003092743	A1	20031113	WO 2003-US13936	20030505
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

PRIORITY APPLN. INFO.: US 2002-377454P P 20020503

OTHER SOURCE(S): MARPAT 139:369675

AB Radiopharmaceutical compds. are disclosed having a radionuclide chelating moiety and a targeting **ligand**, and optionally a linker. Formulations of compns. useful for making the radiopharmaceutical compds. contain a chelating **ligand**, a reducing agent, an exchange **ligand** and a stabilizer. Prepn. and formulation of ^{99m}Tc-labeled conjugates of bombesin analogs are described. The formulations described can be used clin., i.e. directly injected, without the need for HPLC purifn. Such formulations can be prepd. for both diagnostic imaging and/or radiotherapy.

IC ICM A61K051-00

CC 63-5 (Pharmaceuticals)
Section cross-reference(s): 8, 34

IT **Ligands**
RL: RCT (Reactant); RACT (Reactant or reagent)
(exchange; targeted radiopharmaceutical formulations)

IT 490-79-9, Gentisic acid 526-95-4, Gluconic acid 23351-51-1, **Glucoheptonic acid**
RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(exchange **ligand**; targeted radiopharmaceutical formulations)

IT 463-52-5, Formamidine **7772-99-8**, Stannous chloride, biological studies 15158-11-9D, Cupric ion, salts, biological studies 16940-66-2, Sodium borohydride 22541-90-8D, Stannous ion, salts, biological studies
RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(reducing agent; targeted radiopharmaceutical formulations)

IT **215307-03-2P** 495391-14-5DP, radiolabeled conjugates
RL: DGN (Diagnostic use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(targeted radiopharmaceutical formulations)

IT 29451-71-6D, Ranatensin, radiolabeled conjugates 31078-12-3D, Alytesin, radiolabeled conjugates 31362-50-2D, Bombesin, radiolabeled conjugates 31362-50-2D, Bombesin, radiolabeled conjugates of analogs 55749-97-8D, Litorin (peptide), radiolabeled conjugates 87734-77-8D, Phyllolitorin, radiolabeled conjugates 93755-85-2D, Gastrin-releasing peptide (human), radiolabeled conjugates **622410-90-6 622410-91-7 622410-92-8** 622422-19-9D, radiolabeled conjugates
RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(targeted radiopharmaceutical formulations)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 3 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:261872 HCAPLUS

DOCUMENT NUMBER: 138:292714

TITLE: Disulfide-reduced neogalactosyl serum albumin and use of radiolabeled derivative thereof for liver imaging

INVENTOR(S): Jeong, Jae Min; Lee, Jaetae

PATENT ASSIGNEE(S): S. Korea

SOURCE: PCT Int. Appl., 39 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003027148	A1	20030403	WO 2002-KR1787	20020919
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.:

KR 2001-59413 A 20010925

AB Disclosed is disulfide-reduced neogalactosyl serum albumin and use of its radiolabeled compd. for liver imaging. Also, the present invention is concerned with a kit for liver imaging, which is capable of radiolabeling neogalactosyl human serum albumin. The 99mTc-labeled neolactosyl-albumin compd. according to the present invention has excellent stability as well as a high accumulation rate in liver, thereby allowing its application in liver imaging.

IC ICM C07K014-765

CC 63-5 (Pharmaceuticals)

Section cross-reference(s): 8, 33

IT Antioxidants

Chelating agents

Imaging agents

Liver

Radiopharmaceuticals

Reducing agents

Test kits

(radiolabeled disulfide-reduced galactosyl/lactosyl serum albumins for liver imaging)

IT **14133-76-7DP**, Technetium 99, albumin-neogalactosyl conjugates labeled with, biological studies

RL: DGN (Diagnostic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(metastable; radiolabeled disulfide-reduced galactosyl/lactosyl serum albumins for liver imaging)

IT 59-23-4DP, Galactose, radiolabeled albumin conjugates, biological studies
 60-00-4DP, Edta, radiolabeled albumin conjugates 63-42-3DP, Lactose, radiolabeled albumin conjugates 77-92-9DP, Citric acid, radiolabeled albumin conjugates 110-15-6DP, Succinic acid, radiolabeled albumin conjugates, biological studies 526-83-0DP, Tartaric acid, radiolabeled albumin conjugates 526-95-4DP, Gluconic acid, radiolabeled albumin conjugates 13598-36-2DP, Phosphonic acid, derivs., radiolabeled albumin conjugates 13981-25-4DP, Copper 64, albumin-neogalactosyl conjugates labeled with, biological studies **14378-26-8DP**, Rhenium 188, albumin-neogalactosyl conjugates labeled with, biological studies 14913-49-6DP, Bismuth 212, albumin-neogalactosyl conjugates labeled with, biological studies 14981-64-7DP, Palladium 109, albumin-neogalactosyl conjugates labeled with, biological studies **14998-63-1DP**, Rhenium 186, albumin-neogalactosyl conjugates labeled with, biological studies 15092-94-1DP, Lead 212, albumin-neogalactosyl conjugates labeled with, biological studies 15757-86-5DP, Copper 67, albumin-neogalactosyl conjugates labeled with, biological studies 23351-51-1DP,

Glucoheptonic acid, radiolabeled albumin conjugates
 25525-21-7DP, Glucaric acid, radiolabeled albumin conjugates
 54933-92-5DP, radiolabeled albumin conjugates
 RL: DGN (Diagnostic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(radiolabeled disulfide-reduced galactosyl/lactosyl serum albumins for liver imaging)

IT 59-23-4, D-Galactose, reactions 62-56-6, Thiourea, reactions 107-14-2, Chloroacetonitrile 108-24-7, Acetic anhydride 124-41-4, Sodium methoxide 14641-93-1, .alpha.-Lactose **23288-61-1** 503816-10-2

RL: RCT (Reactant); RACT (Reactant or reagent)
 (radiolabeled disulfide-reduced galactosyl/lactosyl serum albumins for liver imaging)

IT **7772-99-8**, Stannous chloride, uses

RL: NUU (Other use, unclassified); USES (Uses)
 (reducing agents; radiolabeled disulfide-reduced galactosyl/lactosyl serum albumins for liver imaging)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 4 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:849692 HCAPLUS

DOCUMENT NUMBER: 137:353506

TITLE: Chromium support-agglomerate-transition metal polymerization catalysts and processes utilizing same
 INVENTOR(S): Shih, Keng-Yu; Denton, Dean Alexander; Glemza, Rimantas

PATENT ASSIGNEE(S): W.R. Grace & Co.-Conn., USA

SOURCE: PCT Int. Appl., 113 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002088199	A1	20021107	WO 2002-US11370	20020410
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

US 2003204032 A1 20031030 US 2002-120310 20020410

PRIORITY APPLN. INFO.: US 2001-287617P P 20010430

OTHER SOURCE(S): MARPAT 137:353506

AB The present invention is directed to a one-step method for forming a supported catalyst complex of high activity by substantially simultaneously contacting a **bidentate** or **tridentate ligand** forming compd., a transition metal compd. and a chromium immobilized Lewis acid support-agglomerate. A typical catalyst was manufd. by mixing Na silicate with H2SO4 8 min, washing the resulting gel with 2% NH3 soln. 18-36 h at 65.5.degree., washing the base-washed gel

with water at 82.degree., milling the washed gel as a 20% aq. slurry until the colloidal content was 20-25%, mixing the resulting wet-milled material with a 20% aq. slurry of dry-milled, base-water-washed gel prep'd. by flash or spray drying the base-water-washed gel to moisture content <10% and milling to av. particle size 5 .mu.m in a 25:75 wet-milled material-dry-milled material ratio, combining the resulting slurry with a montmorillonite (I) slurry at silica-I ratio 80:20, mixing the resulting slurry with 1% aq. Cr(OAc)₃ soln., spray drying, activating by heating with air in fluidized bed at 400.degree./h to 540.degree., contacting 3 g activated support with 80 mg each bis(2,6-diisopropylaniline-1,8-naphthylene) and NiBr₂(1,2-dimethoxyethane).

IC ICM C08F010-02
ICS C08F004-02; C08F004-70
CC 35-3 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 67
IT 7440-31-5D, Tin, org. derivs. 7440-66-6D, Zinc, org. derivs.
RL: CAT (Catalyst use); USES (Uses)
(cocatalysts; highly active heterogeneous chromium catalysts having metal oxide-ion-contg. layered material supports and transition metal compds. for manuf. of polyolefins)
IT 7439-88-5D, Iridium, compds. 7439-89-6D, Iron, compds.
7439-96-5D, Manganese, compds. 7440-04-2D, Osmium, compds.
7440-05-3D, Palladium, compds. 7440-06-4D, Platinum, compds.
7440-16-6D, Rhodium, compds. 7440-18-8D, Ruthenium, compds.
7440-32-6D, Titanium, compds. 7440-47-3D, Chromium, compds.
7440-48-4D, Cobalt, compds. 7440-58-6D, Hafnium, compds. 7440-62-2D, Vanadium, compds. 7440-67-7D, Zirconium, compds.
RL: CAT (Catalyst use); USES (Uses)
(transition metal compds.; highly active heterogeneous chromium catalysts having metal oxide-ion-contg. layered material supports and transition metal compds. for manuf. of polyolefins)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 5 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:503808 HCAPLUS
DOCUMENT NUMBER: 137:81261
TITLE: Lubricants containing bridged complex for use in plastic-processing of metallic materials
INVENTOR(S): Oshima, Heijiro; Kawahara, Fumio; Tomono, Mitsuru
PATENT ASSIGNEE(S): Mec International K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002188090	A2	20020705	JP 2000-389433	20001221
US 2002123435	A1	20020905	US 2001-990857	20011115
PRIORITY APPLN. INFO.:			JP 2000-389433	A 20001221

AB The title lubricants comprise (1) .gtoreq.2 central metal atoms, (2) .gtoreq.1 **multidentate ligand(s)** for bridging the central metal atoms, and (3) .gtoreq.1 metal atom(s) in the **multidentate ligand(s)** where these metal atoms with

multiple coordination ability do not partly bond to any central metal(s) directly. The central metal is selected from zinc, manganese, iron, molybdenum, tin, antimony, and copper, and the **multidentate ligands** are selected from oxygen-contg. inorg. acid, org. acid, and amine compds. or their derivs. The lubricants are used in the plastic-processing of metals.

IC ICM C10M107-54
ICS C10M173-02; C10N010-02; C10N010-04; C10N010-08; C10N010-10;
C10N010-12; C10N010-14; C10N010-16; C10N040-24
CC 51-8 (Fossil Fuels, Derivatives, and Related Products)
Section cross-reference(s): 55, 56
ST plastic processing metal bridging complex **ligand** lubricant
IT Lubricants
(bridging **ligand**-contg.; lubricants contg. bridged complex
for use in plastic-processing of metallic materials)
IT **Ligands**
RL: NUU (Other use, unclassified); USES (Uses)
(**multidentate**; lubricants contg. bridged complex for use in
plastic-processing of metallic materials)
IT 7439-89-6D, Iron, chelates with metal-contg. **multidentate**
ligand 7439-96-5D, Manganese, chelates with metal-contg.
multidentate ligand 7439-98-7D, Molybdenum, chelates
with metal-contg. **multidentate ligand**
7440-31-5D, Tin, chelates with metal-contg. **multidentate**
ligand 7440-36-0D, Antimony, chelates with metal-contg.
multidentate ligand 7440-50-8D, Copper, chelates with
metal-contg. **multidentate ligand** 7440-66-6D, Zinc,
chelates with metal-contg. **multidentate ligand**
RL: NUU (Other use, unclassified); USES (Uses)
(lubricants contg. bridged complex for use in plastic-processing of
metallic materials)

L29 ANSWER 6 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:487478 HCAPLUS

DOCUMENT NUMBER: 137:67462

TITLE: Novel **multidentate** sulfur-containing
ligands

INVENTOR(S): Atwood, David A.; Howerton, Brock S.; Matlock, Matthew

PATENT ASSIGNEE(S): University of Kentucky Research Foundation, USA

SOURCE: PCT Int. Appl., 50 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002049967	A2	20020627	WO 2001-US46441	20011206
WO 2002049967	A3	20021017		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,
UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,

CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2002100732 A1 20020801 US 2000-730622 20001206
 US 6586600 B2 20030701
 AU 2002045070 A5 20020701 AU 2002-45070 20011206
 EP 1355883 A2 20031029 EP 2001-993216 20011206

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.: US 2000-730622 A 20001206
 WO 2001-US46441 W 20011206

OTHER SOURCE(S): MARPAT 137:67462

AB Novel sulfur-contg. **ligands** for binding of heavy metals are disclosed. The **ligands** incorporate a central ring structure and pendant alkyl-thiol chains. The **ligands** are of the general structure (I) or (II) where n is an integer from 1-4, and X is selected from the group consisting of hydrogen, lithium, sodium, potassium, rubidium, cesium, and francium. The **ligands** of the present invention are suitable for binding any metal in or capable of being placed in a pos. oxidn. state, such as cadmium, lead, nickel, zinc, mercury, copper and the like. Addnl., methods for removal of heavy metals from various substances are disclosed, comprising sepg. selected heavy metals from selected substances by contacting the substances with an effective amt. of the novel sulfur-contg. chelate **ligands** for a sufficient time to form stable, irreversible **ligand-metal** ppts., and removing such ppts.

IC ICM C02F001-00
 CC 60-2 (Waste Treatment and Disposal)
 ST **multidentate** sulfur contg **ligand** metal removal water
 IT **Ligands**
 RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP (Preparation); USES (Uses)
 (multidentate sulfur-contg.; novel multidentate sulfur-contg. **ligands** for removal of heavy metals from water)

IT Acid mine drainage
 Mining
 Soil reclamation
 Wastewater treatment
 (novel multidentate sulfur-contg. **ligands** for removal of heavy metals from water)

IT Heavy metals
 RL: REM (Removal or disposal); PROC (Process)
 (novel multidentate sulfur-contg. **ligands** for removal of heavy metals from water)

IT 626-04-ODP, 1,3 Benzenedithiol, derivs. 219718-05-5DP,
 2,6-Pyridinedithiol, derivs. 333334-31-9P 351994-94-0P 439602-51-4P
 439602-55-8P
 RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP (Preparation); USES (Uses)
 (novel multidentate sulfur-contg. **ligands** for removal of heavy metals from water)

IT 99-63-8, Isophthaloyl chloride 156-57-0, 2-Aminoethanethiol hydrochloride 3739-94-4, 2,6-Pyridine dicarbonyl dichloride 7211-54-3,
 3-Aminopropanethiol hydrochloride 16627-75-1 31098-39-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (novel multidentate sulfur-contg. **ligands** for removal of heavy metals from water)

IT 7429-90-5, Aluminum, processes 7439-89-6, Iron, processes 7439-92-1,

Lead, processes 7439-95-4, Magnesium, processes 7439-96-5,
 Manganese, processes 7439-97-6, Mercury, processes 7440-02-0, Nickel,
 processes 7440-22-4, Silver, processes 7440-24-6, Strontium, processes
 7440-28-0, Thallium, processes 7440-31-5, Tin, processes
 7440-36-0, Antimony, processes 7440-38-2, Arsenic, processes
 7440-39-3, Barium, processes 7440-41-7, Beryllium, processes
 7440-43-9, Cadmium, processes 7440-47-3, Chromium, processes
 7440-48-4, Cobalt, processes 7440-50-8, Copper, processes 7440-57-5,
 Gold, processes 7440-62-2, Vanadium, processes 7440-66-6, Zinc,
 processes 7782-49-2, Selenium, processes

RL: REM (Removal or disposal); PROC (Process)

(novel **multidentate** sulfur-contg. **ligands** for
 removal of heavy metals from water)

IT 67-66-3, Chloroform, uses 121-44-8, Triethylamine, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(novel **multidentate** sulfur-contg. **ligands** for
 removal of heavy metals from water)

L29 ANSWER 7 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:300878 HCAPLUS

DOCUMENT NUMBER: 136:284425

TITLE: Method of preparing a radiotherapeutic formulation

INVENTOR(S): Basmanov, V. V.; Kolesnik, O. V.

PATENT ASSIGNEE(S): Gosudarstvennyi Nauchnyi Tsentr Rossiyskoi Federatsii

Fiziko-Ehnergeticheskii Institut im Akad. A. I.

Leypunskogo, Russia

SOURCE: Russ., No pp. given

CODEN: RUXXE7

DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2164420	C2	20010327	RU 1999-102608	19990210
PRIORITY APPLN. INFO.:			RU 1999-102608	19990210

AB The invention pertains to medicine and radionuclide therapy. The invention relates to methods of prepg. radiotherapeutic prepn. labeled with rhenium-188. A **lyophilized** mixt. of reagents has a **ligand** (1-hydroxyethylidene diphosphonic acid), a reducing agent (SnCl₂.cntdot.2H₂O) and an antioxidant (ascorbic acid). To this mixt. sterile aq. soln. of perrhenate contg. radioactive sodium perrhenate (Na¹⁸⁸ReO₄) obtained in elution of rhenium-188 generator and nonactive rhenium as sodium or potassium perrhenate for increase of rhenium concn. in order to make its concn. in the prepn. soln. from 10⁻⁴ to 10⁻³ mol/L are added. Value of vol. activity of the prepn. soln. is adjusted from 148 to 2960 MBq/mL. Then the prepn. is heated at 90-100 .degree.C for 15-30 min. The prepn. is ready for use after its cooling and soln. neutralization to pH 7, not above, at once. The method provides a sterile radiotherapeutic prepn. showing high quality indexes for optimal short time in clinic conditions.

IC ICM A61K051-00

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 8

IT 2809-21-4, 1-Hydroxyethylidene diphosphonic acid 10025-69-1, Tin dichloride dihydrate 10466-65-6, Potassium perrhenate 13472-33-8,

Sodium perrhenate 14378-26-8, Rhenium 188, biological studies
125845-39-8

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(prepg. a radiotherapeutic formulation contg. Re-188)

L29 ANSWER 8 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:290457 HCAPLUS

DOCUMENT NUMBER: 137:109472

TITLE: Solid phase preparations of 99mTc labeled radiopharmaceuticals

AUTHOR(S): Rao, Ponugoti S.; Li, Hongyu; Reddy, Kishan C.; Thakur, Mathew L.

CORPORATE SOURCE: Thomas Jefferson University, Philadelphia, PA, 19107, USA

SOURCE: Journal of Labelled Compounds & Radiopharmaceuticals (2002), 45(3), 231-239
CODEN: JLCRD4; ISSN: 0362-4803

PUBLISHER: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB For the prepn. of most 99mTc radiopharmaceuticals, SnCl₂ has remained the agent of choice for redn. of Tc⁷⁺ to lower valency states, which facilitates its chelation by compds. of diagnostic importance. We have developed a simple technique in which SnCl₂ **lyophilized** in a glass vial, either alone or on a solid matrix of polymeric microspheres (beads), was used. Tin-113 (t_{1/2} = 115 d) was used as a tracer, which facilitated quant. assessment of loss or release of tin in the reaction mixts. The feasibility and efficacy of this technique were examd. for preps. of four 99mTc- labeled peptides, in which SnCl₂ was used as a reducing agent for radiolabeling, a procedure well established in our lab. Labeling efficiencies for all four peptides using SnCl₂ on solid phase was greater than 95%, as compared to less than 90% (P = 0.05) for SnCl₂ **lyophilized** without the solid matrix. Colloid formation was less than 3% in either case. The stability of SnCl₂ was greater than six months for solid matrix, and less for that without the microspheres. The ¹¹³Sn measured as a daughter product ^{113m}In indicated that release of SnCl₂ from microspheres in reaction mixt. was 85 +/- 3%, as compared to 80 +/- 5% **lyophilized** alone. The recovery of 99mTc in soln. from microspheres was 95-100%. The large size of the microspheres used (649 .mu.m) eliminated the risk of drawing them through a needle in a syringe used for injection of a prepn.

CC 34-3 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 9, 63, 71

IT **Chelating agents**

Freeze drying

Radiopharmaceuticals

(solid phase preps. of 99mTc labeled radio-peptides using SnCl₂ **lyophilized** on a solid matrix of polymeric microspheres)

IT Peptides, preparation

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(solid phase preps. of 99mTc labeled radio-peptides using SnCl₂ **lyophilized** on a solid matrix of polymeric microspheres)

IT 14133-76-7DP, peptide complexes 14133-76-7P, preparation

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)
 (solid phase preps. of 99mTc labeled radio-peptides using SnCl₂
lyophilized on a solid matrix of polymeric microspheres)
 IT 276856-31-6DP, Tp 850, N- or C-terminal Gly-(D)Ala-Gly-Gly deriv.
 276856-31-6DP, Tp 850, N- or C-terminal Gly-(D)Ala-Gly-Gly deriv., 99mTc
 complex
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (solid phase preps. of 99mTc labeled radio-peptides using SnCl₂
lyophilized on a solid matrix of polymeric microspheres)
 IT 7772-99-8, Tin dichloride, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (solid phase preps. of 99mTc labeled radio-peptides using SnCl₂
lyophilized on a solid matrix of polymeric microspheres)
 REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 9 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2002:107170 HCAPLUS
 DOCUMENT NUMBER: 136:156409
 TITLE: Radiopharmaceutical for diagnostic imaging containing
 a technetium-99m nitride heterocomplex
 INVENTOR(S): Duatti, Adriano; Bolzati, Cristina; Uccelli, Licia;
 Boschi, Alessandra; Refosco, Fiorenzo; Tisato,
 Francesco
 PATENT ASSIGNEE(S): Nihon Medi-Physics Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 61 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002009771	A1	20020207	WO 2001-JP6402	20010725
W: AU, CA, JP, KR, NO, NZ, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
AU 2001076677	A5	20020213	AU 2001-76677	20010725
EP 1307239	A1	20030507	EP 2001-954337	20010725
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
JP 2004505064	T2	20040219	JP 2002-515323	20010725
NO 2003000342	A	20030321	NO 2003-342	20030123
US 2004018147	A1	20040129	US 2003-332707	20030904
PRIORITY APPLN. INFO.:			JP 2000-228898	A 20000728
			WO 2001-JP6402	W 20010725
OTHER SOURCE(S): MARPAT 136:156409				
AB A radiopharmaceutical for diagnostic imaging contg. as an active ingredient a technetium-99m nitride heterocomplex comprising technetium-99m nitride and two different ligands coordinated therewith, i.e., a bisphosphinoamine compd. as a .pi. electron acceptor and a bidentate ligand as a .pi. electron donor and represented by the following formula: [99mTc(N)(PNP)(XY)]+ wherein 99mTc(N) is technetium-99m nitride, PNP is a bisphosphinoamine compd. and XY is a bidentate ligand , is markedly accumulated in heart and adrenal glands and hence is useful for radiodiagnostic imaging				

of heart and adrenal glands.

IC ICM A61K051-04

CC 63-5 (Pharmaceuticals)

Section cross-reference(s): 8

IT 79-45-8D, 99mTc complexes 147-84-2D, 99mTc complexes 302-01-2D, Hydrazine, derivs., 99mTc complexes 471-32-9D, Dithiocarbamic acid, derivs., 99mTc complexes 7628-15-1D, 99mTc complexes **14133-76-7D**, Technetium 99, nitride heterocomplexes, biological studies 20184-94-5D, 99mTc complexes 25179-61-7D, N,N-Dipropyldithiocarbamic acid, 99mTc complexes 30824-25-0D, 99mTc complexes 30853-94-2D, 99mTc complexes 37600-59-2D, 99mTc complexes 44547-11-7D, N-Methoxy-N-methyldithiocarbamic acid, 99mTc complexes 66534-96-1D, Bis(diphenylphosphinoethyl)amine, 99mTc complexes 157499-71-3D, 99mTc complexes 209522-65-6D, 99mTc complexes 209522-66-7D, 99mTc complexes 209522-67-8D, 99mTc complexes 209522-68-9D, 99mTc complexes 209522-69-0D, 99mTc complexes 209522-70-3D, 99mTc complexes 209522-71-4D, 99mTc complexes 209522-72-5D, 99mTc complexes 209522-73-6D, 99mTc complexes 209522-74-7D, 99mTc complexes 209522-75-8D, 99mTc complexes 209522-76-9D, 99mTc complexes 383188-31-6D, 99mTc complexes 395653-15-3D, 99mTc complexes 395653-16-4D, 99mTc complexes 395653-17-5D, 99mTc complexes 395653-18-6D, 99mTc complexes 395653-19-7D, 99mTc complexes 395653-20-0D, 99mTc complexes 395653-21-1D, 99mTc complexes 395653-22-2D, 99mTc complexes 395653-23-3D, 99mTc complexes 395653-24-4D, 99mTc complexes 395653-25-5D, 99mTc complexes 395653-26-6D, 99mTc complexes 395653-27-7D, 99mTc complexes 395653-28-8D, 99mTc complexes 395653-29-9D, 99mTc complexes

RL: DGN (Diagnostic use); BIOL (Biological study); USES (Uses)
(radiopharmaceutical for diagnostic imaging contg. technetium-99m nitride heterocomplex)

IT 209522-61-2P 395653-00-6P 395653-01-7P
395653-02-8P 395653-03-9P 395653-04-0P
395653-05-1P 395653-06-2P 395653-07-3P
395653-08-4P 395653-09-5P 395653-10-8P
395653-11-9P 395653-12-0P 395653-13-1P
395653-14-2P

RL: DGN (Diagnostic use); PKT (Pharmacokinetics); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(radiopharmaceutical for diagnostic imaging contg. technetium-99m nitride heterocomplex)

IT 23288-60-0, Sodium Pertechnetate-99Tc

RL: RCT (Reactant); RACT (Reactant or reagent)
(radiopharmaceutical for diagnostic imaging contg. technetium-99m nitride heterocomplex)

IT 7631-90-5, Sodium hydrogen sulfite 7772-99-8, Stannous chloride, biological studies 16940-66-2, Sodium borohydride 66245-95-2

RL: DGN (Diagnostic use); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(reducing agent; radiopharmaceutical for diagnostic imaging contg. technetium-99m nitride heterocomplex)

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 10 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:868274 HCAPLUS

DOCUMENT NUMBER: 136:11284

TITLE: Formulation of Tc and Re carbonyl complexes using

stannous ion as the reductant for pertechnetate and
 perrhenate
 INVENTOR(S): Pipes, David W.; Dyszlewski, Mary E.; Webb, Elizabeth
 G.
 PATENT ASSIGNEE(S): Mallinckrodt Inc., USA
 SOURCE: PCT Int. Appl., 20 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001089586	A2	20011129	WO 2001-US15670	20010508
WO 2001089586	A3	20020822		
W: JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
US 6359119	B1	20020319	US 2000-576960	20000524
EP 1283729	A2	20030219	EP 2001-944139	20010508
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
JP 2003535005	T2	20031125	JP 2001-585827	20010508
US 2002147316	A1	20021010	US 2002-53612	20020124
PRIORITY APPLN. INFO.: US 2000-576960 A 20000524 WO 2001-US15670 W 20010508				

AB The invention relates to novel aminocarboxylate **ligands** that are suitable for complexing with a radionuclide, and are useful as therapeutic agents and as imaging agents for diagnostic purposes. In accordance with the present invention, a method of prepg. fac-[M(CO)3(OH2)3] (I, where M is Mn, 99mTc, 186Re or 188Re) involves reacting a metal in a permetallate form with carbon monoxide and stannous ion. I can react with a **ligand Lx**, to form a compd. fac-[M(CO)3Lx]n (wherein M is as defined above, Lx is a monodentate or **multidentate ligand** or a mixt. of these **ligands**, and n is a charge of the **ligand Lx** increased with one charge). The invention also is directed to novel compds., and kits for carrying out the disclosed methods. [Tc(CO)3(OH2)3]+ complexes were prepd. in high yields by using stannous ion as the reductant. Kits were formulated by using the above compd.

IC ICM A61K051-04

CC 63-8 (Pharmaceuticals)

Section cross-reference(s): 8, 78

IT **Ligands**
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (**bidentate**; formulation of Tc and Re carbonyl complexes using stannous ion as the reductant for pertechnetate and perrhenate)

IT **Ligands**
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (**multidentate**; formulation of Tc and Re carbonyl complexes using stannous ion as the reductant for pertechnetate and perrhenate)

IT **Ligands**
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (**tridentate**; formulation of Tc and Re carbonyl complexes using stannous ion as the reductant for pertechnetate and perrhenate)

IT 60-00-4, EDTA, reactions 67-43-6, DTPA 71-00-1, L-Histidine, reactions

139-13-9, Nitrilotriacetic acid 142-73-4, Iminodiacetic acid 630-08-0,
Carbon monoxide, reactions 7488-55-3, Stannous sulfate 7722-88-5,
Sodium **Pyrophosphate 7772-99-8**, Tin chloride (SnCl₂),
reactions **7783-47-3**, Stannous fluoride **10025-69-1**,
Stannous chloride dihydrate **10031-24-0**, Stannous bromide
10294-70-9, Stannous iodide 13007-85-7 **23288-61-1**
56491-86-2 60239-18-1, DOTA

RL: RCT (Reactant); RACT (Reactant or reagent)

(formulation of Tc and Re carbonyl complexes using stannous ion as the
reductant for pertechnetate and perrhenate)

IT **163932-31-8P**

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
study); PREP (Preparation); USES (Uses)

(formulation of Tc and Re carbonyl complexes using stannous ion as the
reductant for pertechnetate and perrhenate)

IT

7439-96-5D, Manganese, complexes **14133-76-7D**, Technetium
99, complexes, biological studies **14378-26-8D**, Rhenium 188,
complexes, biological studies **14998-63-1D**, Rhenium 186,
complexes, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(metastable; formulation of Tc and Re carbonyl complexes using stannous
ion as the reductant for pertechnetate and perrhenate)

L29 ANSWER 11 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:110118 HCAPLUS

DOCUMENT NUMBER: 134:168318

TITLE: Tumor imaging agents, methods and kits

INVENTOR(S): Elmaleh, David R.; Babich, John W.

PATENT ASSIGNEE(S): The General Hospital Corporation, USA

SOURCE: U.S., 10 pp., Cont.-in-part of Appl. No. WO96-US20675.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6187286	B1	20010213	US 1997-846999	19970501
WO 9724146	A1	19970710	WO 1996-US20675	19961227
W: AU, CA, JP, MX, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
WO 9848849	A1	19981105	WO 1998-US8776	19980430
W: AU, CA, JP, MX				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9871718	A1	19981124	AU 1998-71718	19980430
AU 751889	B2	20020829		
EP 975373	A1	20000202	EP 1998-918880	19980430
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002500639	T2	20020108	JP 1998-547405	19980430
MX 9910058	A	20000930	MX 1999-10058	19991101

PRIORITY APPLN. INFO.:

WO 1996-US20675 A2 19961227
US 1995-9516P P 19951228
US 1997-846999 A 19970501
WO 1998-US8776 W 19980430

OTHER SOURCE(S): MARPAT 134:168318

AB The invention provides tumor imaging agents comprising a radionuclide in assocn. with a nucleotide polyphosphate targeting mol. Methods for using the tumor imaging agents and kits contg. the tumor imaging agents or components suitable for prodn. of the tumor imaging agents are also provided. In one example, ^{99m}Tc -Ap4A is prepd. from $^{99m}\text{TcO}_4$ and Ap4A using SnCl_2 as the reducing agent and mannitol as coligand/coeluant, and using for scintigraphic imaging of a breast tumor model in mice.

IC A61K051-00; A61M036-14

NCL 424001730

CC 63-5 (Pharmaceuticals)

Section cross-reference(s): 8

IT **Chelating agents**

Drug delivery systems

Drug targeting

Radiopharmaceuticals

Reducing agents

Scintigraphy

Test kits

(tumor imaging agents, methods and kits)

IT 69-65-8, Mannitol 87-69-4, Tartaric acid, biological studies 526-95-4,
Gluconic acid 23351-51-1, **Glucoheptonic acid**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(coligand/coeluant; tumor imaging agents, methods and kits)

IT **7772-99-8**, Stannous chloride, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(reducing agent; tumor imaging agents, methods and kits)

IT **7440-31-5D**, Tin, compds., reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(reducing agents; tumor imaging agents, methods and kits)

IT 5542-28-9DP, Ap4A, technetium-99 complex **14133-76-7DP**,

Technetium 99, nucleotide polyphosphate complexes, biological studies

RL: BPR (Biological process); BSU (Biological study, unclassified); SPN

(Synthetic preparation); THU (Therapeutic use); BIOL (Biological study);

PREP (Preparation); PROC (Process); USES (Uses)

(tumor imaging agents, methods and kits)

IT **23288-61-1**, ^{99}Tc -pertechnetate **98120-07-1**

RL: RCT (Reactant); RACT (Reactant or reagent)

(tumor imaging agents, methods and kits)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 12 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:608693 HCAPLUS

DOCUMENT NUMBER: 133:207808

TITLE: Asymmetric cycloaddition reactions using transition
metal chiral Schiff base complexes

INVENTOR(S): Jacobsen, Eric N.; Schaus, Scott E.; Dossetter,
Alexander G.; Jamison, Timothy F.

PATENT ASSIGNEE(S): President and Fellows of Harvard College, USA

SOURCE: PCT Int. Appl., 100 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000050365	A1	20000831	WO 2000-US4742	20000223
W: AU, CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6211370	B1	20010403	US 1999-255480	19990223
PRIORITY APPLN. INFO.:			US 1999-255480	A 19990223
			US 1998-6104	A2 19980113

OTHER SOURCE(S): MARPAT 133:207808

AB The present invention relates to a process for stereoselective cycloaddn. reactions which generally comprises a cycloaddn. reaction between a pair of substrates (1,3-diene and aldehyde), each either chiral or prochiral, that contain reactive .pi.-systems, in the presence of a nonracemic transition metal Schiff base chiral complex catalyst, to produce a stereoisomerically enriched product. The present invention also relates to novel asym. catalyst complexes comprising a metal and an asym. tridentate ligand.

IC ICM C07B053-00
ICS C07D309-30; C07D309-38; C07F011-00

CC 27-13 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 25, 67, 78

IT 7429-90-5DP, Aluminum, Schiff base complexes, preparation 7439-89-6DP, Iron, Schiff base complexes, preparation 7439-95-4DP, Magnesium, Schiff base complexes, preparation 7439-96-5DP, Manganese, Schiff base complexes, preparation 7439-98-7DP, Molybdenum, Schiff base complexes, preparation 7440-02-0DP, Nickel, Schiff base complexes, preparation 7440-09-7DP, Potassium, Schiff base complexes, preparation 7440-17-7DP, Rubidium, Schiff base complexes, preparation 7440-18-8DP, Ruthenium, Schiff base complexes, preparation 7440-21-3DP, Silicon, Schiff base complexes, preparation 7440-23-5DP, Sodium, Schiff base complexes, preparation 7440-24-6DP, Strontium, Schiff base complexes, preparation 7440-31-5DP, Tin, Schiff base complexes, preparation 7440-33-7DP, Tungsten, Schiff base complexes, preparation 7440-42-8DP, Boron, Schiff base complexes, preparation 7440-47-3DP, Chromium, Schiff base complexes, preparation 7440-48-4DP, Cobalt, Schiff base complexes, preparation 7440-55-3DP, Gallium, Schiff base complexes, preparation 7440-56-4DP, Germanium, Schiff base complexes, preparation 7440-62-2DP, Vanadium, Schiff base complexes, preparation 7440-70-2DP, Calcium, Schiff base complexes, preparation 7440-74-6DP, Indium, Schiff base complexes, preparation 149656-63-3P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(prepn. as asym. cycloaddn. catalysts)

IT 125593-94-4P 151380-45-9P 232266-04-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. as chiral ligand for transition metal Schiff base complexes as asym. cycloaddn. catalysts)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 13 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:371230 HCAPLUS

DOCUMENT NUMBER: 131:174922

TITLE: An improved kit formulation of a dopamine transporter imaging agent: [Tc-99m]TRODAT-1

AUTHOR(S): Choi, S. R.; Kung, M.-P.; Flossl, K.; Meegalla, S.;

CORPORATE SOURCE: Kung, H. F.
Departments of Radiology, University of Pennsylvania,
Philadelphia, PA, 19104, USA
SOURCE: Nuclear Medicine and Biology (1999), 26(4), 461-466
CODEN: NMBIEO; ISSN: 0969-8051
PUBLISHER: Elsevier Science Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Recently, [Tc-99m]TRODAT-1, the first Tc-99m-labeled tracer for imaging CNS dopamine transporters in humans, was reported. This tracer displayed excellent specific binding to dopamine transporters in the basal ganglia region of the brain, thus it is potentially useful for the diagnosis of deficit of dopamine transporters in neurodegenerative diseases, such as Parkinson's disease. Prepn. of [Tc-99m]TRODAT-1 was previously achieved by a multistep kit formulation. It is highly desirable to further improve the prepn. by developing a simplified one-vial formulation with a reduced amt. of TRODAT-1 **ligand** for routine clin. use. To achieve this goal, a series of studies to optimize labeling efficiency by varying a combination of factors (amt. of free **ligand**, reaction reagents, and reaction pH) was carried out. [Tc-99m]TRODAT-1 prepd. by this new kit formulation was evaluated by assessing the brain uptake and target (striatum) vs. nontarget (cerebellum) ratios in rats. Appropriate amts. of various ingredients for a one-vial kit formulation providing .gtoreq.90% radiolabeling yields were identified. The most consistent and reliable formulation contained 10 .mu.g of TRODAT-1 (a redn. of free **ligand** from 200 .mu.g to 10 .mu.g), 32 .mu.g of SnCl₂, 10 mg of sodium **glucoheptonate**, and 840 .mu.g of disodium EDTA in one vial as a **lyophilized** kit. It is feasible to reconstitute the vial with [Tc-99m]pertechnetate (0.5-2 mL, .ltoreq.1110 MBq, 30 mCi), resulting in a final soln. with a pH value of 4.5-5.0. [Tc-99m]TRODAT-1, prepd. by this new kit, was stable at room temp. for 6 h. Biodistribution studies of this agent in rats with the new formulation showed similar regional brain distribution as compared with those obtained with the previous prepn. (high striatum-to-cerebellum ratio). In conclusion, using this **lyophilized** one-vial kit formulation, [Tc-99m]TRODAT-1 can be prepd. with greater than 90% radiochem. purity. This simplified kit will significantly improve the reliability of prepn. of this agent for routine clin. use.

CC 63-5 (Pharmaceuticals)

Section cross-reference(s): 8

IT 7772-99-8, Stannous chloride, reactions 23288-61-1

31138-65-5, Sodium **glucoheptonate** 189950-11-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(effect of reaction conditions on [Tc-99m]TRODAT-1 yield using improved kit formulation)

IT 184677-53-0P

RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)

(improved kit formulation of dopamine transporter imaging agent [Tc-99m]TRODAT-1)

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 14 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:277716 HCAPLUS

DOCUMENT NUMBER: 131:2272

TITLE: Modified **pyrophosphate**-99mTc kit for application in nuclear cardiology

AUTHOR(S): Djokic, D.; Maksin, T.; Vucina, J.; Jankovic, D.

CORPORATE SOURCE: Laboratory Radioisotopes, Vinca Institute Nuclear Sciences, Belgrade, 11001, Yugoslavia

SOURCE: Journal of Radioanalytical and Nuclear Chemistry (1998), 238(1-2), 155-157
CODEN: JRNCMD; ISSN: 0236-5731

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A modified 99mTc(Sn)-**pyrophosphate** (PyP) kit for the application in nuclear cardiol. (radioventriculog., angiocardiol., scintigraphy of blood pool) was developed. Each vial contains 12 mg PyP (Na4P2O7), 4 mg SnCl2.cntdot.2H2O, 2.5 mg gentisic acid, and 10 mg NaCl. The reconstitution is performed by dissolving the **lyophilized** kit in 3 mL 0.9% NaCl. In comparison with the std. **pyrophosphate** kit for bone scanning and detection of myocardial infarction, it contains an increased amt. of Sn(II) so that the molar ratio **ligand** /reductant is lowered from 25 to 2.5. The radiochem. analyses showed that the radiochem. purity of the labeled kit is high (> 90%) during three hours after addn. of 99mTc-activity. The shelf-life of the inactive freeze-dried prepn. is .ltoreq.4 mo providing that it is kept in vacuum and at appropriate temp. (2-8.degree.). The biodistribution studies revealed increased accumulation in blood and low uptake by liver and kidneys. It was concluded that the modified kit performs stable and reproducible properties.

CC 8-9 (Radiation Biochemistry)

ST technetium 99 **pyrophosphate** imaging agent test kit

IT Heart, disease
(infarction; modified **pyrophosphate**-99mTc kit for application in nuclear cardiol.)

IT Imaging agents
Test kits
(modified **pyrophosphate**-99mTc kit for application in nuclear cardiol.)

IT 490-79-9, Gentisic acid 7647-14-5, Sodium chloride, biological studies 7722-88-5, Tetrasodium **pyrophosphate** 10025-69-1, Stannous chloride dihydrate 54627-10-0
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(modified **pyrophosphate**-99mTc kit for application in nuclear cardiol.)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 15 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:194032 HCAPLUS

DOCUMENT NUMBER: 130:234067

TITLE: Imaging agents for early detection and monitoring of cardiovascular plaque

INVENTOR(S): Elmaleh, David R.; Fischman, Alan J.; Babich, John W.

PATENT ASSIGNEE(S): The General Hospital Corporation, USA

SOURCE: PCT Int. Appl., 23 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9912579	A1	19990318	WO 1998-US18685	19980908
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2302837	AA	19990318	CA 1998-2302837	19980908
AU 9893074	A1	19990329	AU 1998-93074	19980908
EP 1011738	A1	20000628	EP 1998-945939	19980908
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRIORITY APPLN. INFO.:			US 1997-925213	A 19970908
			WO 1998-US18685	W 19980908
AB	The invention provides imaging agents comprising a label in assocn. with a plaque specific targeting mol. Methods for using the imaging agents to diagnose or monitor plaque formation and growth and kits contg. the cardiovascular agents or components suitable for prodn. of the imaging agents are also provided.			
IC	ICM A61K051-08 ICS A61K051-12; A61K051-10			
CC	8-9 (Radiation Biochemistry) Section cross-reference(s): 63			
IT	Atherosclerosis Cardiovascular system Chelating agents Imaging agents Reducing agents Test kits Thrombus (imaging agents for early detection and monitoring of cardiovascular plaque)			
IT	69-65-8, Mannitol 87-69-4, Tartaric acid, uses 526-95-4, D-Gluconic acid 23351-51-1, Glucosheptonic acid RL: MOA (Modifier or additive use); USES (Uses) (imaging agents for early detection and monitoring of cardiovascular plaque)			
IT	14133-76-7DP , Technetium 99, imaging agents labeled with, biological studies RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (imaging agents for early detection and monitoring of cardiovascular plaque)			
IT	7440-31-5D , Tin, complexes with glucosheptonic acid, reactions 23288-61-1 23351-51-1D, tin complexes 133081-26-2 134314-57-1 RL: RCT (Reactant); RACT (Reactant or reagent) (reactant; imaging agents for early detection and monitoring of cardiovascular plaque)			
IT	7440-31-5D , Tin, compds., uses RL: MOA (Modifier or additive use); USES (Uses)			

(reducing agents; imaging agents for early detection and monitoring of cardiovascular plaque)

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 16 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:352844 HCAPLUS

DOCUMENT NUMBER: 129:6435

TITLE: Water-based lubricants containing sulfur as coordinating atom and their use

INVENTOR(S): Ojima, Heijiro; Takeuchi, Masahiko; Ikesue, Fumio; Kashimura, Noritoshi; Kawahara, Fumio; Tomono, Mitsuru

PATENT ASSIGNEE(S): Toyota Jidosha K. K., Japan; Mec International Corp.; Ojima, Heijiro; Takeuchi, Masahiko; Ikesue, Fumio; Kashimura, Noritoshi; Kawahara, Fumio; Tomono, Mitsuru

SOURCE: PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9822472	A1	19980528	WO 1997-JP4197	19971118
W: JP, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 947519	A1	19991006	EP 1997-912498	19971118
EP 947519	B1	20030604		
R: DE, FR, GB				
JP 3217072	B2	20011009	JP 1998-523466	19971118
JP 2001323294	A2	20011122	JP 2001-149839	19971118
TW 521086	B	20030221	TW 1998-87107249	19980511
US 2002111278	A1	20020815	US 2001-988401	20011119
PRIORITY APPLN. INFO.:				
			JP 1996-306910	A 19961118
			JP 1998-523466	A3 19971118
			WO 1997-JP4197	W 19971118
			US 1999-308383	A1 19990701

AB An oil-free water-based lubricant which can form a lubricating film necessary for heavy working of metal only by applying it on the surface of a metal. This water-based lubricant is one prepd. by suspending or dispersing a metal chelate compd. in water with a surfactant or the like, and the metal chelate compd. is one composed of .gtoreq.1 metal atoms selected from among Zn, Mn, Fe, Mo, Sn and Sb and a **multidentate** chelate **ligand** wherein .gtoreq.1 of the coordinating atoms is S. The lubricant can form a tough lubricating film when applied on the surface of a metal. Since the lubricating film contains S as the coordinating atom, it can give free S radicals through decompn. caused by a triboreaction under extreme-pressure conditions. The S radicals react speedily with the surface of the metal owing to their high reactivity to form a metal sulfide having a lubricating effect. Alternatively, the S radicals react also with the metal ions formed by the decompn. of the metal chelate compd. to form another metal sulfide having a lubricating effect. Thus, the water-based lubricant can attain excellent lubrication.

IC ICM C07F003-06

ICS C07F007-22; C07F009-90; C07F011-00; C07F013-00; C07F015-02; C10M135-18; C10M139-00; C10M173-00; C10N040-20; C10N040-24;

C10N080-00

CC 51-8 (Fossil Fuels, Derivatives, and Related Products)
 Section cross-reference(s): 55, 56
 IT 147-84-2D, N,N-Diethyldithiocarbamic acid, hydroxo-aqua zinc complexes
 150-11-8D, N,N-Dibutyldithiocarbamic acid, oxymolybdenum sulfide complexes
 7439-89-6D, Iron, chelates with sulfur-contg. compds., uses
7439-96-5D, Manganese, chelates with sulfur-contg. compds., uses
 7439-98-7D, Molybdenum, chelates with sulfur-contg. compds., uses
7440-31-5D, Tin, chelates with sulfur-contg. compds., uses
 7440-36-0D, Antimony, chelates with sulfur-contg. compds., uses
 7440-66-6D, Zinc, chelates with sulfur-contg. compds., uses 7758-29-4,
 Sodium tripolyphosphate 14324-55-1, Bis(diethyldithiocarbamate)zinc
 RL: MOA (Modifier or additive use); NUU (Other use, unclassified); TEM
 (Technical or engineered material use); USES (Uses)
 (water-based lubricants contg. sulfur as coordinating atom and their
 use)

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 17 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:150116 HCAPLUS

DOCUMENT NUMBER: 128:164464

TITLE: Direct labeling of antibodies IgG with rhenium-186
 using sodium **glucoheptonate**

AUTHOR(S): Zhu, Zhi Hong; Wu, Yong Hui; Zhang, Zhi Yong; Liu,
 Yuan Fang

CORPORATE SOURCE: Department Technical Physics, Peking University,
 Beijing, 100871, Peop. Rep. China

SOURCE: Radiochimica Acta (1997), 79(2), 105-108
 CODEN: RAACAP; ISSN: 0033-8230

PUBLISHER: R. Oldenbourg Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In the direct labeling of antibodies with Re-186, 188, the lower redox
 potential of ReO₄⁻ than TcO₄⁻ requires the addn. of excess SnCl₂ and a
 medium-chelating agent for stabilizing the excess of SnCl₂ in soln.
 Through extensive tests, Na **glucoheptonate** (GH) was chosen as an
 excellent stabilizer for SnCl₂ and also the reduced Re(V) from a variety
 of chelators, such as citrate, cyclodextrin, tartrate, inositol, glucose,
 glycine, etc. ReO₄⁻-soln. was then quant. reduced for 2 h with newly
 prepd. SnCl₂(GH) soln. Then, the authors directly incorporated the
 reduced Re to the antibodies IgG modified with 135-fold of NaHSO₃ and
 3500-fold of 2-ME, and more than 90% of specific binding was yielded in
 100-150 min at room temp. TLC anal. indicated that >5% of activity was in
 the colloid form. Radiolabeled antibodies IgG were stable to the
 challenging of 700-fold of DTPA, and also showed fine in vivo stability.

CC 8-9 (Radiation Biochemistry)
 Section cross-reference(s): 15

ST IgG labeling rhenium 186 sodium **glucoheptonate**

IT Immunoglobulins

RL: BAC (Biological activity or effector, except adverse); BPR (Biological
 process); BSU (Biological study, unclassified); PEP (Physical, engineering
 or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC
 (Process); USES (Uses)

(G, 186Re-IgG; antibodies IgG direct labeling with Re-186 using Na
glucoheptonate)

IT Immunoglobulins

RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(G; antibodies IgG direct labeling with Re-186 using Na
glucoheptonate)

IT Blood
Bone
Heart
Intestine
Kidney
Liver
Lung
Muscle
Spleen
Stomach
Thyroid gland

(antibodies IgG direct labeling with Re-186 using Na
glucoheptonate, distribution)

IT **14998-63-1**, Rhenium 186, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(antibodies IgG direct labeling with Re-186 using Na
glucoheptonate)

IT 31138-65-5P, Sodium **glucoheptonate**

RL: BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)

(antibodies IgG direct labeling with Re-186 using Na
glucoheptonate as a **ligand**)

IT **7772-99-8P**, Tin chloride SnCl₂, biological studies

RL: BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)

(antibodies IgG direct labeling with Re-186 using SnCl₂ as a
stabilizer)

L29 ANSWER 18 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:594673 HCAPLUS

DOCUMENT NUMBER: 127:249431

TITLE: Liquid-phase routes to metal sulfide films from metal
thiocarboxylate complexes with **multidentate**
ligands

INVENTOR(S): Hampden-Smith, Mark; Kunze, Klaus; Nyman, May

PATENT ASSIGNEE(S): Hampden-Smith, Mark, USA; Kunze, Klaus; Nyman, May

SOURCE: PCT Int. Appl., 65 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9731723	A1	19970904	WO 1997-US4145	19970227
W: CA, FI, JP, KR				

RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
 PRIORITY APPLN. INFO.: US 1996-607363 19960227
 OTHER SOURCE(S): MARPAT 127:249431

AB A metal sulfide film is formed on a substrate by application of a soln. of .gtoreq.1 metal compd. precursor comprising .gtoreq.1 **ligand** RCS2 or RCOS and .gtoreq.1 soly.-improving **ligand** L, where R is (un)substituted alkyl or aryl and L is a monodentate or **multidentate ligand**, followed by thermal conversion of the precursor to the metal sulfide. Thus, a 5% soln. of Ca(SAc)2.15-crown-5 in EtOH was applied to a suitable substrate (e.g., Si or indium tin oxide) by dip coating or spin coating and heated at 700.degree. under N for 15-30 min to form a CaS film .apprx.100 nm thick. Thicker films could be obtained by performing multiple coating steps. The films are esp. useful in electroluminescent flat-panel displays.

IC ICM B05D001-26

ICS B05D003-02

CC 42-2 (Coatings, Inks, and Related Products)

Section cross-reference(s): 73

IT 7429-91-6, Dysprosium, uses **7439-96-5**, Manganese, uses 7440-10-0, Praseodymium, uses 7440-22-4, Silver, uses 7440-27-9, Terbium, uses 7440-45-1, Cerium, uses 7440-50-8, Copper, uses 7440-52-0, Erbium, uses 7440-53-1, Europium, uses 7440-57-5, Gold, uses 7440-60-0, Holmium, uses

RL: MOA (Modifier or additive use); USES (Uses)

(dopant; liq.-phase routes to metal sulfide films from metal thiocarboxylate complexes)

IT 75-65-0DP, tert-Butanol, cadmium and tin thioacetate complexes 507-09-5DP, Thioacetic acid, cadmium and tin complexes **7440-31-5DP**, Tin, Bu thioacetate complexes, preparation 7440-43-9DP, Cadmium, Bu thioacetate complexes, preparation 188799-92-0P 188799-94-2P 188799-96-4P 188799-98-6P 195618-09-8P, preparation 195618-10-1P, preparation 195618-11-2P, preparation 195618-13-4P 195618-15-6P 195618-22-5P 195618-23-6P 195618-26-9P 195830-84-3P, preparation
 RL: SPN (Synthetic preparation); PREP (Preparation)

(liq.-phase routes to metal sulfide films from metal thiocarboxylate complexes)

L29 ANSWER 19 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:471330 HCAPLUS

DOCUMENT NUMBER: 127:155873

TITLE: Crystalline metal-organic microporous materials

INVENTOR(S): Yaghi, Omar M.

PATENT ASSIGNEE(S): Nalco Chemical Company, USA

SOURCE: U.S., 20 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5648508	A	19970715	US 1995-560224	19951122
EP 790253	A2	19970820	EP 1996-118783	19961122
EP 790253	A3	19990901		
EP 790253	B1	20020206		

R: DE, FR, GB, IT

PRIORITY APPLN. INFO.:

US 1995-560224 A 19951122

- AB Novel metal-org. microporous materials were prepd. in soln. using mild reaction conditions from a metal or metalloid ion with a **ligand** contg. **multidentate** functional groups in the presence of a templating agent. The resultant microporous materials are useful in the purifn. of liqs. and gases. Thus, $\text{Co}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$ reacted with 1,3,5-benzenetricarboxylic acid (H3L) in presence of pyridine templating agent in presence of polyethylene oxide in $\text{CH}_2\text{ClCH}_2\text{Cl}$ to give microporous polymeric $\text{CoL}(\text{py})_2 \cdot 2.2/3\text{py}$ which was used to sep. benzene from MeCN. $\text{Zn}_2\text{L}(\text{NO}_3) \cdot 3.5\text{H}_2\text{O} \cdot 0.5\text{EtOH}$ was prepd. also.
- IC ICM C07F009-00
ICS C07F013-00; C07F005-00
- NCL 556009000
- CC 78-4 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 66, 75
- IT 56-81-5DP, 1,2,3-Propanetriol, metal carboxylic cryst. microporous materials, preparation 57-55-6DP, 1,2-Propanediol, metal carboxylic cryst. microporous materials, preparation 62-53-3DP, Benzenamine, metal carboxylic cryst. microporous materials, preparation 64-17-5DP, Ethanol, metal carboxylic cryst. microporous materials, preparation 67-56-1DP, Methanol, metal carboxylic cryst. microporous materials, preparation 67-63-0DP, 2-Propanol, metal carboxylic cryst. microporous materials, preparation 71-23-8DP, 1-Propanol, metal carboxylic cryst. microporous materials, preparation 71-36-3DP, 1-Butanol, metal carboxylic cryst. microporous materials, preparation 71-41-0DP, 1-Pentanol, metal carboxylic cryst. microporous materials, preparation 74-93-1DP, Methanethiol, metal carboxylic cryst. microporous materials, preparation 75-08-1DP, Ethanethiol, metal carboxylic cryst. microporous materials 75-31-0DP, 2-Aminopropane, metal carboxylic cryst. microporous materials 75-50-3DP, Trimethylamine, metal carboxylic cryst. microporous materials 75-65-0DP, tert-Butanol, metal carboxylic cryst. microporous materials 75-85-4DP, tert-Pentanol, metal carboxylic cryst. microporous materials 78-83-1DP, Iso-butanol, metal carboxylic cryst. microporous materials 78-90-0DP, Propylenediamine, metal carboxylic cryst. microporous materials 78-92-2DP, sec-Butanol, metal carboxylic cryst. microporous materials 87-66-1DP, 1,2,3-Benzenetriol, metal carboxylic cryst. microporous materials 89-05-4DP, 1,2,4,5-Benzenetetracarboxylic acid, metal carboxylic cryst. microporous materials 100-21-0DP, 1,4-Benzenedicarboxylic acid, metal carboxylic cryst. microporous materials, preparation 100-51-6DP, Benzyl alcohol, metal carboxylic cryst. microporous materials 102-69-2DP, Tripropylamine, metal carboxylic cryst. microporous materials 102-71-6DP, metal carboxylic cryst. microporous materials, preparation 103-83-3DP, N,N-Dimethylbenzylamine, metal carboxylic cryst. microporous materials 105-59-9DP, metal carboxylic cryst. microporous materials 106-50-3DP, 1,4-Benzenediamine, metal carboxylic cryst. microporous materials, preparation 106-58-1DP, metal carboxylic cryst. microporous materials 107-03-9DP, 1-Propanethiol, metal carboxylic cryst. microporous materials 107-15-3DP, 1,2-Ethanediamine, metal carboxylic cryst. microporous materials, preparation 107-18-6DP, 2-Propen-1-ol, metal carboxylic cryst. microporous materials, preparation 107-21-1DP, 1,2-Ethandiol, metal carboxylic cryst. microporous materials, preparation 107-88-0DP, 1,3-Butanediol, metal carboxylic cryst. microporous materials 108-01-0DP, N,N-Dimethylethanolamine, metal carboxylic cryst. microporous materials 108-46-3DP, Resorcinol, metal carboxylic cryst. microporous materials 108-72-5DP, 1,3,5-Triaminobenzene, metal carboxylic cryst. microporous materials 108-73-6DP, 1,3,5-Benzenetriol, metal carboxylic

cryst. microporous materials 108-89-4DP, 4-Methylpyridine, metal carboxylic cryst. microporous materials 108-91-8DP, Cyclohexylamine, metal carboxylic cryst. microporous materials 108-93-0DP, Cyclohexanol, metal carboxylic cryst. microporous materials, preparation 108-95-2DP, Phenol, metal carboxylic cryst. microporous materials, preparation 108-98-5DP, Benzenethiol, metal carboxylic cryst. microporous materials, preparation 109-06-8DP, 2-Methylpyridine, metal carboxylic cryst. microporous materials 109-80-8DP, 1,3-Propanedithiol, metal carboxylic cryst. microporous materials 109-83-1DP, N-Methylethanolamine, metal carboxylic cryst. microporous materials 110-63-4DP, 1,4-Butanediol, metal carboxylic cryst. microporous materials, preparation 110-86-1DP, Pyridine, metal carboxylic cryst. microporous materials, preparation 110-89-4DP, Piperidine, metal carboxylic cryst. microporous materials, preparation 110-91-8DP, Morpholine, metal carboxylic cryst. microporous materials, preparation 111-27-3DP, n-Hexanol, metal carboxylic cryst. microporous materials 111-29-5DP, 1,5-Pentanediol, metal carboxylic cryst. microporous materials 120-80-9DP, Catechol, metal carboxylic cryst. microporous materials 121-44-8DP, metal carboxylic cryst. microporous materials 123-31-9DP, 1,4-Benzenediol, metal carboxylic cryst. microporous materials, preparation 123-51-3DP, Iso-pentanol, metal carboxylic cryst. microporous materials 141-43-5DP, metal carboxylic cryst. microporous materials, preparation 156-87-6DP, 3-Aminopropanol, metal carboxylic cryst. microporous materials 288-32-4DP, Imidazole, metal carboxylic cryst. microporous materials 290-37-9DP, Pyrazine, metal carboxylic cryst. microporous materials 290-87-9DP, 1,3,5-Triazine, metal carboxylic cryst. microporous materials 463-57-0DP, Methanediol, metal carboxylic cryst. microporous materials 463-78-5DP, Methanetriol, metal carboxylic cryst. microporous materials 463-84-3DP, Methanetetrol, metal carboxylic cryst. microporous materials 504-63-2DP, 1,3-Propanediol, metal carboxylic cryst. microporous materials 533-73-3DP, 1,2,4-Benzenetriol, metal carboxylic cryst. microporous materials 553-26-4DP, 4,4'-Bipyridine, metal carboxylic cryst. microporous materials 554-95-0DP, 1,3,5-Benzenetricarboxylic acid, metal carboxylic cryst. microporous materials 556-48-9DP, 1,4-Cyclohexanediol, metal carboxylic cryst. microporous materials 623-26-7DP, 1,4-Dicyanobenzene, metal carboxylic cryst. microporous materials 624-39-5DP, 1,4-Benzenedithiol, metal carboxylic cryst. microporous materials 626-56-2DP, 3-Methylpiperidine, metal carboxylic cryst. microporous materials 626-67-5DP, N-Methylpiperidine, metal carboxylic cryst. microporous materials 626-89-1DP, Iso-hexanol, metal carboxylic cryst. microporous materials 626-95-9DP, 1,4-Pentanediol, metal carboxylic cryst. microporous materials 629-11-8DP, 1,6-Hexanediol, metal carboxylic cryst. microporous materials 928-40-5DP, 1,5-Hexanediol, metal carboxylic cryst. microporous materials 1191-08-8DP, 1,4-Butanedithiol, metal carboxylic cryst. microporous materials 1569-69-3DP, Cyclohexanethiol, metal carboxylic cryst. microporous materials 2041-15-8DP, 1,3,5-Cyclohexanetriol, metal carboxylic cryst. microporous materials 3114-70-3DP, 1,4-Diaminocyclohexane, metal carboxylic cryst. microporous materials 3174-67-2DP, 1,3-Pentanediol, metal carboxylic cryst. microporous materials 4328-94-3DP, 1,3,5-Pentanetriol, metal carboxylic cryst. microporous materials 7429-90-5DP, Aluminum, carboxylate cryst. microporous materials, preparation 7439-88-5DP, Iridium, carboxylate cryst. microporous materials, preparation 7439-89-6DP, Iron, carboxylate cryst. microporous materials, preparation 7439-92-1DP, Lead, carboxylate cryst. microporous materials, preparation 7439-95-4DP, Magnesium, carboxylate cryst. microporous materials, preparation **7439-96-5DP**

, Manganese, carboxylate cryst. microporous materials, preparation 7439-97-6DP, Mercury, carboxylate cryst. microporous materials, preparation 7439-98-7DP, Molybdenum, carboxylate cryst. microporous materials, preparation 7440-02-0DP, Nickel, carboxylate cryst. microporous materials, preparation 7440-03-1DP, Niobium, carboxylate cryst. microporous materials, preparation 7440-04-2DP, Osmium, carboxylate cryst. microporous materials, preparation 7440-05-3DP, Palladium, carboxylate cryst. microporous materials, preparation 7440-06-4DP, Platinum, carboxylate cryst. microporous materials, preparation 7440-15-5DP, Rhenium, carboxylate cryst. microporous materials, preparation 7440-16-6DP, Rhodium, carboxylate cryst. microporous materials, preparation 7440-18-8DP, Ruthenium, carboxylate cryst. microporous materials, preparation 7440-20-2DP, Scandium, carboxylate cryst. microporous materials, preparation 7440-21-3DP, Silicon, carboxylate cryst. microporous materials, preparation 7440-22-4DP, Silver, carboxylate cryst. microporous materials, preparation 7440-24-6DP, Strontium, carboxylate cryst. microporous materials, preparation 7440-25-7DP, Tantalum, carboxylate cryst. microporous materials, preparation 7440-28-0DP, Thallium, carboxylate cryst. microporous materials, preparation 7440-31-5DP, Tin, carboxylate cryst. microporous materials, preparation 7440-32-6DP, Titanium, carboxylate cryst. microporous materials, preparation 7440-33-7DP, Tungsten, carboxylate cryst. microporous materials, preparation 7440-36-0DP, Antimony, carboxylate cryst. microporous materials, preparation 7440-38-2DP, Arsenic, carboxylate cryst. microporous materials, preparation 7440-39-3DP, Barium, carboxylate cryst. microporous materials, preparation 7440-43-9DP, Cadmium, carboxylate cryst. microporous materials, preparation 7440-47-3DP, Chromium, carboxylate cryst. microporous materials, preparation 7440-48-4DP, Cobalt, carboxylate cryst. microporous materials, preparation 7440-50-8DP, Copper, carboxylate cryst. microporous materials, preparation 7440-55-3DP, Gallium, carboxylate cryst. microporous materials, preparation 7440-56-4DP, Germanium, carboxylate cryst. microporous materials, preparation 7440-57-5DP, Gold, carboxylate cryst. microporous materials, preparation 7440-58-6DP, Hafnium, carboxylate cryst. microporous materials, preparation 7440-62-2DP, Vanadium, carboxylate cryst. microporous materials, preparation 7440-65-5DP, Yttrium, carboxylate cryst. microporous materials, preparation 7440-66-6DP, Zinc, carboxylate cryst. microporous materials, preparation 7440-67-7DP, Zirconium, carboxylate cryst. microporous materials, preparation 7440-69-9DP, Bismuth, carboxylate cryst. microporous materials, preparation 7440-70-2DP, Calcium, carboxylate cryst. microporous materials, preparation 7440-74-6DP, Indium, carboxylate cryst. microporous materials, preparation 10365-94-3DP, 1,3,5-Tricyanobenzene, metal carboxylic cryst. microporous materials 13360-63-9DP, Ethylbutylamine, metal carboxylic cryst. microporous materials 16432-53-4DP, 1,4-Hexanediol, metal carboxylic cryst. microporous materials 18990-98-2DP, 1,3,6-Hexanetriol, metal carboxylic cryst. microporous materials 21531-91-9DP, 1,3-Hexanediol, metal carboxylic cryst. microporous materials 26401-20-7DP, tert-Hexanol, metal carboxylic cryst. microporous materials 26635-63-2DP, sec-Pentanol, metal carboxylic cryst. microporous materials 37769-60-1DP, sec-Hexanol, metal carboxylic cryst. microporous materials 38004-59-0DP, 1,3,5-Benzenetrithiol, metal carboxylic cryst. microporous materials 44307-07-5DP, 1,1,2,2-Tetrahydroxyethane, metal carboxylic cryst. microporous materials 75387-95-0DP, 1,1,3,3-Tetrahydroxypropane, metal carboxylic cryst. microporous materials 84000-91-9DP,

1,1,4,4-Butanetetrol, metal carboxylic cryst. microporous materials
100884-80-8DP, Adamantane-1,3,5,7-tetracarboxylic acid, metal carboxylic
cryst. microporous materials 193197-67-ODP, Methanetetracarboxylic acid,
metal carboxylic cryst. microporous materials

RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP
(Preparation); USES (Uses)

(prepn. and use in purifn. of liqs. and gases)

L29 ANSWER 20 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:345978 HCAPLUS

DOCUMENT NUMBER: 127:39662

TITLE: Development of a stable single-vial formulation for a
new technetium complex using bilayer
lyophilization

AUTHOR(S): Haby, Thomas; Thakur, Ajit; Nowotnik, David; Chan, Yee
Wai; Linder, Karen; Varia, Sailesh

CORPORATE SOURCE: Bristol-Myers Squibb Pharmaceutical Research
Institute, New Brunswick, NJ, USA

SOURCE: PDA Journal of Pharmaceutical Science and Technology
(1997), 51(2), 68-71

CODEN: JPHTEU; ISSN: 1076-397X

PUBLISHER: PDA, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The interaction between different components used in the prepn. of a new
radiodiagnostic agent, BMS-181321, was overcome by its
lyophilization as a bilayered product. BMS-181321 is composed of
a nitroimidazole **ligand** BMS-181032, that is complexed with
technetium-99m just before it is used in radionuclide imaging studies.
Stannous chloride is required to reduce technetium from the +7 to the +5
oxidn. state before it can be complexed by the **ligand**. Because
BMS-181032 is unstable in the presence of stannous chloride (when mixed in
the liq. or solid state), the two components must be contained in sep.
vials. A bilayered **lyophile** was manufd., contg. the
ligand and stannous chloride in sep. layers in a single vial. The
bilayered product was manufd. by first filling a soln. of the
ligand into a vial and freezing the soln. A soln. contg. stannous
chloride was then filled into the same vial on top of the frozen layer of
ligand, and this second layer was also frozen. The two frozen
layers were then **lyophilized** to a dry solid cake. The resulting
bilayered product showed stability comparable to that seen when the
ligand and the reducing agent were contained in sep. vials. The
sepn. provided by the layering was sufficient to prevent any significant
interaction between the reducing agent and the **ligand**.

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 8

ST stability pharmaceutical formulation technetium complex
lyophilization

IT Drug delivery systems

(freeze-dried; development of stable single-vial formulation for new
technetium complex using bilayer **lyophilization**)

IT 7772-99-8, Stannous chloride, reactions 13718-28-0,

Sodium pertechnetate 149876-70-0, BMS 181032

RL: RCT (Reactant); RACT (Reactant or reagent)

(development of stable single-vial formulation for new technetium
complex using bilayer **lyophilization**)

IT 149447-21-2P, BMS-181321

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (development of stable single-vial formulation for new technetium complex using bilayer **lyophilization**)

IT 60120-39-0, .beta.-Cyclodextrin sulfate 190772-08-8
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (development of stable single-vial formulation for new technetium complex using bilayer **lyophilization**)

IT 14133-76-7, Technetium 99, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (metastable; development of stable single-vial formulation for new technetium complex using bilayer **lyophilization**)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 21 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1996:155533 HCAPLUS
 DOCUMENT NUMBER: 124:212160
 TITLE: Monoamine, diamide, thiol-containing metal chelating agents
 INVENTOR(S): McBride, William; Dean, Richard T.
 PATENT ASSIGNEE(S): Diotech, Inc., USA
 SOURCE: PCT Int. Appl., 64 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 44
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9533497	A1	19951214	WO 1995-US6914	19950601
W: AU, BR, CA, CN, JP, KR				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2191951	AA	19951214	CA 1995-2191951	19950601
AU 9526944	A1	19960104	AU 1995-26944	19950601
AU 707040	B2	19990701		
BR 9507917	A	19970812	BR 1995-7917	19950601
CN 1158090	A	19970827	CN 1995-194356	19950601
CN 1093424	B	20021030		
EP 804252	A2	19971105	EP 1995-922159	19950601
EP 804252	B1	20030813		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
JP 10501531	T2	19980210	JP 1995-501181	19950601
AT 246939	E	20030815	AT 1995-922159	19950601
PT 804252	T	20031231	PT 1995-95922159	19950601
ZA 9504548	A	19960315	ZA 1995-4548	19950602
PRIORITY APPLN. INFO.:			US 1994-253973	A 19940603
			WO 1995-US6914	W 19950601

OTHER SOURCE(S): MARPAT 124:212160

AB The invention relates to reagents useful in prepg. radiolabeled diagnostic and therapeutic agents (radiopharmaceuticals). Specifically, the invention provides such reagents that are monoamine, diamide, and thiol-contg. metal chelators. Methods of making such reagents, and methods of using the radiopharmaceuticals produced therefrom are also provided.

IC ICM A61K051-08

- CC 63-8 (Pharmaceuticals)
Section cross-reference(s): 8, 34
- IT **Chelating agents**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(thiol-contg.; monoamine, diamide, and thiol-contg. metal chelating agents as radiopharmaceuticals)
- IT 67-43-6DP, DTPA, conjugates with peptides, technetium 99 complexes
99-14-9DP, Tricarballic acid, conjugates with peptides, technetium 99
complexes 6324-87-4DP, Tricarballic acid imide, conjugates with
peptides, technetium 99 complexes **14133-76-7DP**, Technetium 99,
complexes with peptides, biological studies 158615-68-ODP, technetium 99
complexes 161889-00-5DP, technetium 99 complexes 161889-01-6DP,
technetium 99 complexes 161889-03-8DP, technetium 99 complexes
161889-04-9DP, technetium 99 complexes 161889-06-1DP, technetium 99
complexes 161889-08-3DP, technetium 99 complexes 161889-09-4DP,
technetium 99 complexes 161889-11-8DP, technetium 99 complexes
161889-18-5DP, technetium 99 complexes 161889-19-6DP, technetium 99
complexes 161889-21-ODP, technetium 99 complexes 161889-34-5DP,
technetium 99 complexes 161889-44-7DP, technetium 99 complexes
161889-46-9DP, technetium 99 complexes 161889-49-2DP, technetium 99
complexes 161982-26-9DP, technetium 99 complexes 161982-27-ODP,
technetium 99 complexes 161982-33-8DP, technetium 99 complexes
161982-53-2DP, technetium 99 complexes 161982-55-4DP, technetium 99
complexes 161982-62-3DP, technetium 99 complexes 161982-69-ODP,
technetium 99 complexes 173963-87-6DP, technetium 99 complexes
174350-31-3DP, technetium 99 complexes 174350-32-4DP, technetium 99
complexes 174350-33-5DP, technetium 99 complexes 174350-34-6DP,
technetium 99 complexes 174350-35-7DP, technetium 99 complexes
174350-36-8DP, technetium 99 complexes 174350-37-9DP, technetium 99
complexes 174350-38-ODP, technetium 99 complexes 174350-39-1DP,
technetium 99 complexes 174350-40-4DP, technetium 99 complexes
174350-41-5DP, technetium 99 complexes 174350-42-6DP, technetium 99
complexes 174350-43-7DP, technetium 99 complexes 174350-44-8DP,
technetium 99 complexes 174350-45-9DP, technetium 99 complexes
174350-46-ODP, technetium 99 complexes 174350-47-1DP, technetium 99
complexes 174350-48-2DP, technetium 99 complexes 174350-49-3DP,
technetium 99 complexes 174350-50-6DP, technetium 99 complexes
174350-51-7DP, technetium 99 complexes 174350-52-8DP, technetium 99
complexes 174350-53-9DP, technetium 99 complexes 174350-54-ODP,
technetium 99 complexes 174350-55-1DP, technetium 99 complexes
174350-56-2DP, technetium 99 complexes 174350-57-3DP, technetium 99
complexes 174350-58-4DP, technetium 99 complexes 174350-59-5DP,
technetium 99 complexes 174350-60-8DP, technetium 99 complexes
174350-61-9DP, technetium 99 complexes 174350-62-ODP, technetium 99
complexes 174350-63-1DP, technetium 99 complexes 174350-64-2DP,
technetium 99 complexes
RL: PNU (Preparation, unclassified); THU (Therapeutic use); BIOL
(Biological study); PREP (Preparation); USES (Uses)
(monoamine, diamide, and thiol-contg. metal chelating agents as
radiopharmaceuticals)
- IT **23288-60-0**, Sodium pertechnetate-technetium 99 **153546-52-2**
, Technetium-99 **gluceptate**
RL: RCT (Reactant); RACT (Reactant or reagent)
(monoamine, diamide, and thiol-contg. metal chelating agents as
radiopharmaceuticals)
- IT 7440-15-5D, Rhenium, complexes with chelating agents **7440-31-5D**,
Tin, complexes with chelating agents 7440-50-8D, Copper, complexes with

chelating agents 7440-66-6D, Zinc, complexes with chelating agents
 13981-25-4, Copper 64, biological studies 13981-59-4, Tin 117,
 biological studies **14133-76-7**, Technetium 99, biological studies
14378-26-8, Rhenium 188, biological studies **14998-63-1**,
 Rhenium 186, biological studies 15757-86-5, Copper 67, biological
 studies 161889-05-0 161889-08-3 174350-51-7 174350-65-3
 174350-66-4
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (monoamine, diamide, and thiol-contg. metal chelating agents as
 radiopharmaceuticals)

L29 ANSWER 22 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1996:38839 HCAPLUS
 DOCUMENT NUMBER: 124:66656
 TITLE: Method for production of radiolabeled drug product
 containing stannous salts
 INVENTOR(S): Dansereau, Raymond N.; Line, Bruce R.
 PATENT ASSIGNEE(S): Albany Medical College, USA
 SOURCE: PCT Int. Appl., 19 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9530443	A1	19951116	WO 1995-US5085	19950503

W: CA, JP

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRIORITY APPLN. INFO.: US 1994-238467 19940505

AB A method for producing a radiolabeled drug prodrug which utilizes sterile
 drug **ligand**, sterile stannous ion, and sterile radiolabel to
 assure the suitability of the radiolabeled drug for in vivo usage is
 provided. Thus, 10 mg of dextran-70 was mixed with 0.33 mL of 0.9% NaCl
 injection and the soln. was added to Ultratag RBC (contg. tin chloride
 dihydrate 105 .mu.g max., Na citrate.2H2O 3.67 mg, and dextrose anhyd.
 5.50 mg) in a **lyophilized** form and stored upon argon. To the
 content of the vial was added 1.48 Gbq Technetium 99m sodium pertechnetate
 and mixed and incubated at 22.degree. for 15 min. The in vivo stability
 of the product was shown in human subjects.

IC ICM A61K051-04

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 8

IT **14133-76-7P**, Technetium 99, biological studies

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
 study); PREP (Preparation); USES (Uses)

(metastable; method for prodn. of radiolabeled drug product contg.
 stannous salts)

IT 815-85-0, Stannous tartrate **1344-13-4**, Tin chloride

7772-99-8, Stannous chloride, reactions **7783-47-3**,

Stannous fluoride **13718-28-0**, Sodium pertechnetate

RL: RCT (Reactant); RACT (Reactant or reagent)

(method for prodn. of radiolabeled drug product contg. stannous salts)

IT 7647-14-5, Sodium chloride, biological studies 9004-54-0, Dextran,

biological studies 9005-27-0, Hetastarch **14998-63-1**, Rhenium

186, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(method for prodn. of radiolabeled drug product contg. stannous salts)

L29 ANSWER 23 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:302043 HCAPLUS

DOCUMENT NUMBER: 122:117794

TITLE: Adsorption of 2,2'-bipyridyl onto sepiolite, attapulgite and smectite group clay minerals from Anatolia: the FT-IR and FT-Raman spectra of surface and intercalated species

AUTHOR(S): Akyuz, Sevim; Akyuz, Tanil; Davies, J. Eric D.
CORPORATE SOURCE: Sci. Fac., Istanbul Univ., Istanbul, 34459, Turk.

SOURCE: Journal of Inclusion Phenomena and Molecular Recognition in Chemistry (1994), 18(2), 123-35
CODEN: JIMCEN; ISSN: 0923-0750

PUBLISHER: Kluwer

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The adsorption of 2,2'-bipyridyl by natural sepiolite, attapulgite, hectorite, saponite and natural and ion exchanged (Mn, Fe, Co, Ni, Cu, Zn or Sn) bentonites was studied by FTIR and FT-Raman spectroscopy. Spectroscopic results indicate that most of the adsorbed mols. are coordinated to either exchangeable cations (in the case of smectite group clays) or Lewis acidic centers (in the case of sepiolite and attapulgite) as **bidentate ligands**. The formation of monoanionic surface species also was detected, to a relatively small extent. No physisorbed surface species was obsd. XRD patterns and UV-visible spectra of the samples are also recorded for addnl. information.

CC 73-3 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 66

IT 7439-89-6, Iron, uses **7439-96-5**, Manganese, uses 7440-02-0, Nickel, uses **7440-31-5**, Tin, uses 7440-48-4, Cobalt, uses 7440-50-8, Copper, uses 7440-66-6, Zinc, uses

RL: MOA (Modifier or additive use); USES (Uses)

(adsorption of 2,2'-bipyridyl onto sepiolite, attapulgite and smectite group clay minerals from Anatolia: FT-IR and FT-Raman spectra of surface and intercalated species)

L29 ANSWER 24 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1994:425593 HCAPLUS

DOCUMENT NUMBER: 121:25593

TITLE: Synthesis and structure of several metal 3,8-diaminophenanthridinone complexes

AUTHOR(S): Zailsev, B. E.; Matyushenko, V. V.; Koval'chukova, O. V.; Migachev, G. I.

CORPORATE SOURCE: Rossiisk. Gos. Univ., Moscow, Russia

SOURCE: Zhurnal Neorganicheskoi Khimii (1994), 39(2), 270-5
CODEN: ZNOKAQ; ISSN: 0044-457X

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB Ni(HL)2Cl2, Mn(HL)2Cl2.2H2O, CuL2.4H2O, FeL2(OH).5H2O, ZnL2.4H2O and SnL2.2H2O (HL = 3,8-diaminophenanthridinone) were prepd. and characterized by IR and UV spectra. In the Ni and Mn complexes, the **ligand** is in the neutral lactam form while in the Cu and Fe complexes it is in the bipolar form and in the Zn and Sn complexes in the deprotonated lactam form. The **ligand** is **bidentate**, coordinating through

the N and O atoms.

CC 78-7 (Inorganic Chemicals and Reactions)
 IT 7439-89-6DP, Iron, diaminophenanthridinone complex **7439-96-5DP**,
 Manganese, diaminophenanthridinone complex 7440-02-0DP, Nickel,
 diaminophenanthridinone complex **7440-31-5DP**, Tin,
 diaminophenanthridinone complex 7440-50-8DP, Copper,
 diaminophenanthridinone complex 7440-66-6DP, Zinc,
 diaminophenanthridinone complex 46794-07-4DP, transition metal and tin
 complexes
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

L29 ANSWER 25 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1993:35451 HCAPLUS
 DOCUMENT NUMBER: 118:35451
 TITLE: In situ synthesis of radiopharmaceuticals
 INVENTOR(S): Verbruggen, Alfons M.
 PATENT ASSIGNEE(S): Mallinckrodt Medical, Inc., USA
 SOURCE: PCT Int. Appl., 26 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9214492	A1	19920903	WO 1992-US630	19920127
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
CA 2101642	AA	19920815	CA 1992-2101642	19920127
AU 9214293	A1	19920915	AU 1992-14293	19920127
EP 571545	A1	19931201	EP 1992-907162	19920127
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE				
JP 06505268	T2	19940616	JP 1992-506601	19920127
PRIORITY APPLN. INFO.:			US 1991-656346	19910214
			WO 1992-US630	19920127

OTHER SOURCE(S): MARPAT 118:35451

AB A process is disclosed for making radiopharmaceuticals in situ, i.e. wherein a radionuclide and an acyclic **ligand** react with constituents of the complex-forming reaction soln. to produce an administrable radiopharmaceutical agent. By forming radiopharmaceuticals according to the invention, it is possible to obtain radiopharmaceuticals previously unattainable because of problems assocd. with the **ligand** synthesis or the complex-forming reaction. Formation of a ^{99m}Tc-labeled radiopharmaceutical (by direct labeling or by exchange labeling) using tetra-L-alanine is described.

IC ICM A61K049-02
 ICS C07F013-00

CC 9-8 (Biochemical Methods)
 Section cross-reference(s): 8, 63

ST in situ radiopharmaceutical prepn; tetraalanine in situ
 radiopharmaceutical prepn; **ligand** cyclization
 radiopharmaceutical

IT Diphosphates
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (as transfer **ligand**, in kit for in situ radiopharmaceutical

- prepn. with **ligand** cyclization)
- IT **Ligands**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (cyclic **ligand** formation from acyclic, in situ
 radiopharmaceutical prepn.)
- IT Reducing agents
 (in kit for in situ radiopharmaceutical prepn. with **ligand**
 cyclization)
- IT Radioelements, reactions
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (in radiopharmaceutical prepn. in situ with cyclic **ligand**
 formation)
- IT Alcohols, uses
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (carboxy, as transfer **ligand**, in kit for in situ
 radiopharmaceutical prepn. with **ligand** cyclization)
- IT **Ligands**
 RL: FORM (Formation, nonpreparative)
 (cyclic, formation of, from acyclic **ligands**, in situ
 radiopharmaceutical prepn.)
- IT Carboxylic acids, uses
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (di-, as transfer **ligand**, in kit for in situ
 radiopharmaceutical prepn. with **ligand** cyclization)
- IT Ketones, uses
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (enolates, as transfer **ligand**, in kit for in situ
 radiopharmaceutical prepn. with **ligand** cyclization)
- IT Carboxylic acids, uses
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (hydroxy, as transfer **ligand**, in kit for in situ
 radiopharmaceutical prepn. with **ligand** cyclization)
- IT Carboxylic acids, uses
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (poly-, as transfer **ligand**, in kit for in situ
 radiopharmaceutical prepn. with **ligand** cyclization)
- IT Pharmaceuticals
 (radio-, prepn. of, in situ, **ligand** cyclization in)
- IT 1758-73-2, Formamidine sulfinic acid 14844-07-6, Dithionite
 108481-52-3
 RL: ANST (Analytical study)
 (as reducing agent, in kit for in situ radiopharmaceutical prepn. with
ligand cyclization)
- IT 50-21-5, uses 50-81-7, Ascorbic acid, uses 69-72-7, Salicylic acid,
 uses 77-92-9, uses 87-69-4, Tartaric acid, uses 88-99-3,
 1,2-Benzenedicarboxylic acid, uses 110-15-6, Succinic acid, uses
 110-16-7, 2-Butenedioic acid (Z)-, uses 141-82-2, Propanedioic acid,
 uses 144-62-7, Oxalic acid, uses 6915-15-7, Malic acid 23351-51-1,
Glucosheptonic acid
 RL: ANST (Analytical study)
 (as transfer **ligand**, in kit for in situ radiopharmaceutical
 prepn. with **ligand** cyclization)
- IT 50-21-5D, derivs. 50-81-7D, Ascorbic acid, derivs. 69-72-7D, Salicylic
 acid, derivs. 77-92-9D, derivs. 87-69-4D, Tartaric acid, derivs.
 88-99-3D, 1,2-Benzenedicarboxylic acid, derivs. 110-15-6D, Succinic
 acid, derivs. 110-16-7D, 2-Butenedioic acid (Z)-, derivs. 141-82-2D,
 Propanedioic acid, derivs. 144-62-7D, Oxalic acid, derivs. 6915-15-7D,

- Malic acid, derivs. 7723-14-0D, Phosphorus, compds. 23351-51-1D,
Glucoseheptonic acid, derivs.
RL: ANST (Analytical study)
(as transfer **ligands**, in kit for in situ radiopharmaceutical
prepn. with **ligand** cyclization)
- IT 7439-89-6,, Iron, uses **7440-31-5**, Tin, uses
RL: ANST (Analytical study)
(divalent, as reducing agent, in kit for in situ radiopharmaceutical
prepn. with **ligand** cyclization)
- IT 7439-88-5, Iridium, reactions **7439-96-5**, Manganese, reactions
7439-98-7, Molybdenum, reactions 7440-02-0, Nickel, reactions
7440-04-2, Osmium, reactions 7440-05-3, Palladium, reactions
7440-06-4, Platinum, reactions 7440-15-5, Rhenium, reactions
7440-16-6, Rhodium, reactions 7440-18-8, Ruthenium, reactions
7440-19-9, Samarium, reactions **7440-26-8**, Technetium, reactions
7440-33-7, Tungsten, reactions 7440-47-3, Chromium, reactions
7440-48-4, Cobalt, reactions 7440-50-8, Copper, reactions 7440-55-3,
Gallium, reactions 7440-66-6, Zinc, reactions 7440-74-6, Indium,
reactions **14133-76-7**, Technetium-99, reactions
14378-26-8, Rhenium-188, reactions **14998-63-1**,
Rhenium-186, reactions
RL: ANST (Analytical study)
(in radiopharmaceutical prep. in situ with cyclic **ligand**
formation)
- IT 7440-50-8, Copper, uses
RL: ANST (Analytical study)
(monovalent, as reducing agent, in kit for in situ radiopharmaceutical
prepn. with **ligand** cyclization)
- IT **145197-29-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of metastable, in situ as radiopharmaceutical)
- IT **145003-87-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of metastable, in situ as radiopharmaceutical, cyclization in
relation to)
- IT 7440-32-6, Titanium, uses 7440-36-0, Antimony, uses
RL: ANST (Analytical study)
(trivalent, as reducing agent, in kit for in situ radiopharmaceutical
prepn. with **ligand** cyclization)

L29 ANSWER 26 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1991:554532 HCAPLUS
DOCUMENT NUMBER: 115:154532
TITLE: Direct radiolabeling of antibodies and other proteins
with technetium or rhenium using tin disulfide bond
reducing agent pretreatment
INVENTOR(S): Rhodes, Buck A.
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 15
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 9101754 A1 19910221 WO 1990-US4461 19900808
 W: AU, CA, JP
 RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE
 US 5078985 A 19920107 US 1989-391474 19890809
 CA 2065299 AA 19910210 CA 1990-2065299 19900808
 CA 2065299 C 20010724
 AU 9065434 A1 19910311 AU 1990-65434 19900808
 AU 650629 B2 19940630
 EP 486622 A1 19920527 EP 1990-915377 19900808
 EP 486622 B1 19981104
 R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE
 JP 05508699 T2 19931202 JP 1990-514313 19900808
 JP 3070763 B2 20000731
 AT 172879 E 19981115 AT 1990-915377 19900808
 ES 2125854 T3 19990316 ES 1990-915377 19900808
 JP 2000053590 A2 20000222 JP 1999-227755 19900808
 US 35457 E 19970218 US 1995-389267 19950216
 US 2001055563 A1 20011227 US 2001-900390 20010706
 PRIORITY APPLN. INFO.:
 US 1989-391474 A 19890809
 JP 1990-514313 A3 19900808
 US 1990-565275 A 19900808
 WO 1990-US4461 A 19900808
 US 1999-393581 XX 19990909
 AB Proteins contg. .gtoreq.1 disulfide bonds are radiolabeled with Tc or Re radionuclides by: (1) reacting the disulfide bonds of the protein with a Sn(II) reducing agent to form Sn(II)-contg. and S-contg. complexes and Sn(IV) reaction byproducts, while preventing excessive fragmentation of the protein; (2) removing excess reducing agent, redn. byproducts, and any impurities to obtain reduced protein; (3) adding radionuclide, e.g. 99Tc (or Re) in the form of Na pertechnetate or perrhenate and pertechnetate or perrhenate reducing agent to reduce the Na pertechnetate or perrhenate and facilitate the labeling by **ligand** exchange, with the addn. in such a manner that further redn. of the protein is limited. The resulting product is stable and can be stored frozen or **lyophilized**. A Sn(II) disulfide bond reducing agent prepd. by adding 0.5 mM SnCl₂ to a soln. contg. 40 mM K biphthalate and 10 mM Na tartrate at pH 5.6 was mixed with a IgG prepn. and kept at room temp. in the dark for 21 h for partial redn. of disulfide bonds. The reaction mixt. was then passed through a desalting column to remove excess Sn(II), Sn(IV) and other salt, and the reduced and Sn(II)-complexed protein fraction was concd. and frozen. A Sn(II) pertechnetate reducing agent, prepd. by the same method as above, was added to the frozen antibody and frozen. Na pertechnetate-99mTc with 2.5 mCi radioactivity was then added to the reduced antibody and mixed at room temp. for labeling. Thin layer chromatog. revealed that 99.6% of the radioactivity was protein bound and HPLC showed that the 99mTc elution paralleled the protein elution profile.
 IC ICM A61K039-395
 CC 9-14 (Biochemical Methods)
 IT **Chelating agents**
 (tin byproduct removal by, in protein pretreatment with disulfide bond reducing agent contg. divalent tin for radioactive labeling)
 IT **7440-31-5, Tin, biological studies**
 RL: BIOL (Biological study)
 (kit contg., for radiolabeling proteins with rhenium or technetium)
 IT **7440-31-5DP, Tin, protein complexes**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, in radiolabeling protein with rhenium or technetium)

- IT 7440-16-6DP, Rhodium, protein conjugates **7440-26-8DP**,
 Technetium, protein conjugates **14133-76-7DP**, protein conjugates
14378-26-8DP, Rhenium-188, protein conjugates **14998-63-1DP**
 , Rhenium-186, protein conjugates
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, protein pretreatment with tin reducing agent in)
- IT **23288-60-0**
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, in labeling of protein pretreated with tin reducing
 agent)
- IT **7772-99-8**, Tin chloride (SnCl₂), biological studies
 RL: BIOL (Biological study)
 (soln. contg. potassium biphthalate and sodium tartrate and, for
 reducing disulfide bond in protein for radioactive labeling)

L29 ANSWER 27 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1991:254002 HCAPLUS
 DOCUMENT NUMBER: 114:254002
 TITLE: Preparation of rhenium phosphonate therapeutic agents
 INVENTOR(S): Pipes, David W.
 PATENT ASSIGNEE(S): Mallinckrodt, Inc., USA
 SOURCE: PCT Int. Appl., 17 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9013530	A1	19901115	WO 1990-US1323	19900312
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE				
US 5021235	A	19910604	US 1989-346411	19890502
CA 2064063	AA	19901103	CA 1990-2064063	19900312
AU 9053554	A1	19901129	AU 1990-53554	19900312
AU 646801	B2	19940310		
EP 470965	A1	19920219	EP 1990-905853	19900312
EP 470965	B1	19950628		
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE				
JP 05500042	T2	19930114	JP 1990-505467	19900312
JP 3080984	B2	20000828		
ES 2076363	T3	19951101	ES 1990-905853	19900312
US 5192526	A	19930309	US 1991-673000	19910321
PRIORITY APPLN. INFO.:				
			US 1989-346411	A 19890502
			WO 1990-US1323	A 19900312

- AB A stabilized radiopharmaceutical ready for use in diagnostic or
 therapeutic applications is prepd. for patients with cancer, heart
 diseases, etc. The preparatory method comprises (1) prepn. of 5 .times.
 10-6 - 2 .times. 10-3M radioactive perrhenate soln., and (2) reducing and
 complexing the perrhenate with a **ligand** (0.01-0.15 M) which
 complexes with the perrhenate, and also with a reductant (0.005-0.02 M),
 wherein the pH of the resultant soln. is 1.5-5.5. Thus,
 186Re-1-hydroxyethylidene diphosphonate (HEDP) with .ltoreq.1% ReO₄⁻ was
 prepd. using Na₂H₂HEDP (a **ligand**), SnCl₂.2H₂O (a reductant),
 gentistic acid (an antioxidant), saline, ReO₄⁻ in EtOH, and 186Re.
- IC ICM C07B059-00

ICS A61K043-00
CC 63-5 (Pharmaceuticals)
IT 7772-99-8, Stannous chloride, uses and miscellaneous
RL: BIOL (Biological study)
(as reductant, in pharmaceutical prepn. contg. radioactive perrhenate)
IT 2809-21-4 14000-31-8, **Pyrophosphate 14378-26-8**, uses
and miscellaneous **14998-63-1**, uses and miscellaneous
15477-76-6, Phosphonate 112319-85-4, Imidodiphosphate
RL: BIOL (Biological study)
(radioactive pharmaceuticals manuf. from)

L29 ANSWER 28 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1988:607594 HCAPLUS
DOCUMENT NUMBER: 109:207594
TITLE: Technetium-99m bone scanning agents-VI. Gel
chromatographic analysis of the plasma protein binding
of technetium-99m(tin)**pyrophosphate**,
technetium-99m(tin)MDP and technetium-99m(tin)HMDP
AUTHOR(S): Kroesbergen, J.; Roozen, A. M. P.; Wortelboer, M. R.;
Gelsema, W. J.; De Ligny, C. L.
CORPORATE SOURCE: Lab. Anal. Chem., Univ. Utrecht, Utrecht, 3522 AD,
Neth.
SOURCE: Nuclear Medicine and Biology (1988), 15(5), 479-87
CODEN: NMBIEO; ISSN: 0883-2897
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The plasma binding of 99mTc complexes of **pyrophosphate**, MDP
(methylenephosphonate), and HMDP (hydroxymethylenediphosphonate) was
investigated in vitro using gel chromatog. on Biogel P-200. Binding
percents ranging 5-15% were found. The pH of the prepn. of the
radiopharmaceutical had a large effect on the protein binding. The
differences between the 3 **ligands** used were small. The chem.
compn. of the complexes was investigated for Tc(Sn)
pyrophosphosphate using gel chromatog. on Biogel P-4. The
protein-bound Tc was not attached to **pyrophosphate**. The chem.
compn. of the unbound Tc-complex is discussed. It is concluded that
protein binding plays a minor role in bone uptake and bone scanning.

CC 8-10 (Radiation Biochemistry)
IT Scintigraphy
(of bone, with technetium-99m-tin-diphosphonates and -
pyrophosphate, plasma protein binding studies in relation to)
IT Bone
(scintigraphy of, with technetium-99m-tin-diphosphonates and -
pyrophosphate, plasma protein binding studies in relation to)
IT Erythrocyte
(technetium-99m-tin-diphosphonates and **-pyrophosphate** binding
by, bone scintigraphy in relation to)
IT Proteins, biological studies
RL: BIOL (Biological study)
(technetium-99m-tin-diphosphonates and **-pyrophosphate** binding
by, of blood plasma, bone scintigraphy in relation to)
IT **14133-76-7D**, Technetium-99, complexes **72945-61-0**,
Technetium-99 hydroxymethylenediphosphonate
RL: BIOL (Biological study)
(proteins of blood plasma binding of metastable, bone scintigraphy in
relation to)
IT 1984-15-2D, technetium-99-tin complexes 2466-09-3D, technetium-99-tin

complexes **7440-31-5D**, Tin, technetium-99-diphosphonates and -
pyrophosphate complexes

RL: BIOL (Biological study)

(proteins of blood plasma binding of, bone scintigraphy in relation to)

L29 ANSWER 29 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1988:507124 HCAPLUS

DOCUMENT NUMBER: 109:107124

TITLE: Tiron as a transfer **ligand** in the prepn. of
protein- and polypeptide-based radiopharmaceuticals

INVENTOR(S): Nicolotti, Robert A.; Ketring, Alan R.; Pak, Koon Y.

PATENT ASSIGNEE(S): Mallinckrodt, Inc., USA

SOURCE: Eur. Pat. Appl., 34 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 248506	A1	19871209	EP 1987-301869	19870304
EP 248506	B1	19920812		
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
US 4732974	A	19880322	US 1986-836535	19860305
AU 8769701	A1	19870910	AU 1987-69701	19870304
AU 596828	B2	19900517		
JP 62270600	A2	19871124	JP 1987-47871	19870304
JP 07091317	B4	19951004		
AT 79278	E	19920815	AT 1987-301869	19870304
ES 2035041	T3	19930416	ES 1987-301869	19870304
CA 1288197	A1	19910827	CA 1987-531302	19870305

PRIORITY APPLN. INFO.:

US 1986-836535 19860305

EP 1987-301869 19870304

AB A conjugate of a protein or polypeptide and a metal ion, esp. Tc, is
prepd. by reacting a metal ion transfer complex comprising a chelate of
tiron or its salt with a protein or polypeptide which has been coupled to
an exogenous chelating group which has a greater affinity for the metal
ion than tiron does. The method is used for prepg. radiopharmaceuticals.
TcO₄⁻ underwent electrolytic redn. in the presence of tiron or
carboxylated sugars; tiron trapped 78% of the Tc as a homogeneous peak and
only 5.3% of the radioactivity was further reduced to TcO₂, whereas for
the sugars (**glucoheptonate**, gluconate, saccharate) 24-30% of the
radioactivity appeared as TcO₂. Continued redn. of the tiron-Tc complex
did not result in further accumulation of TcO₂, and the complex showed
only minor change over a 5-h period. When the tiron-Tc complex was
treated with F(ab')₂ fragments coupled to S-acetylmercaptoglycylglycylglyc
inate, 86.3% of the Tc transferred to the antibodies; however, when
challenged with Ac-substituted F(ab')₂, only 6% of the Tc transferred,
indicating the tiron-Tc complex transfers Tc only to antibodies with
strong chelates attached and not to antibodies similarly acylated with
nonchelating groups.

IC ICM A61K049-02

ICS A61K043-00; C07K003-08

CC 8-9 (Radiation Biochemistry)

IT 7429-90-5D, Aluminum, tiron complexes 7429-91-6D, Dysprosium, tiron
complexes 7439-89-6D, Iron, tiron complexes 7439-91-0D, Lanthanum,

tiron complexes 7439-92-1D, Lead, tiron complexes 7439-95-4D, Magnesium, tiron complexes **7439-96-5D**, Manganese, tiron complexes 7439-97-6D, Mercury, tiron complexes 7439-98-7D, Molybdenum, tiron complexes 7440-00-8D, Neodymium, tiron complexes 7440-02-0D, Nickel, tiron complexes 7440-05-3D, Palladium, tiron complexes 7440-07-5D, Plutonium, tiron complexes 7440-10-0D, Praseodymium, tiron complexes 7440-15-5D, Rhenium, tiron complexes 7440-16-6D, Rhodium, tiron complexes 7440-19-9D, Samarium, tiron complexes 7440-20-2D, Scandium, tiron complexes 7440-24-6D, Strontium, tiron complexes **7440-26-8D**, Technetium, tiron complexes 7440-27-9D, Terbium, tiron complexes 7440-28-0D, Thallium, tiron complexes 7440-29-1D, Thorium, tiron complexes 7440-30-4D, Thulium, tiron complexes **7440-31-5D**, Tin, tiron complexes 7440-32-6D, Titanium, tiron complexes 7440-33-7D, Tungsten, tiron complexes 7440-36-0D, Antimony, tiron complexes 7440-39-3D, Barium, tiron complexes 7440-43-9D, Cadmium, tiron complexes 7440-45-1D, Cerium, tiron complexes 7440-47-3D, Chromium, tiron complexes 7440-48-4D, Cobalt, tiron complexes 7440-50-8D, Copper, tiron complexes 7440-52-0D, Erbium, tiron complexes 7440-53-1D, Europium, tiron complexes 7440-54-2D, Gadolinium, tiron complexes 7440-55-3D, Gallium, tiron complexes 7440-58-6D, Hafnium, tiron complexes 7440-60-0D, Holmium, tiron complexes 7440-61-1D, Uranium, tiron complexes 7440-62-2D, Vanadium, tiron complexes 7440-64-4D, Ytterbium, tiron complexes 7440-65-5D, Yttrium, tiron complexes 7440-66-6D, Zinc, tiron complexes 7440-67-7D, Zirconium, tiron complexes 7440-69-9D, Bismuth, tiron complexes 7440-70-2D, Calcium, tiron complexes 7440-74-6D, Indium, tiron complexes 14119-09-6D, Gallium-67, tiron complexes, biological studies 15750-15-9D, Indium-111, tiron complexes, biological studies
RL: USES (Uses)

(in radiolabeled antibody prepn.)

IT **14133-76-7D**, tiron complexes, biological studies

RL: BIOL (Biological study)

(metastable, in radiolabeled antibody prepn.)

L29 ANSWER 30 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1986:511170 HCAPLUS

DOCUMENT NUMBER: 105:111170

TITLE: ROTOP-BIDA for the preparation of technetium-99m-tin--
N-(p-butylacetanilido)iminodiacetate

AUTHOR(S): Berger, R.; Syhre, R.; Abram, U.

CORPORATE SOURCE: Ber. Radioakt. Isot., Zentralinst. Kernforsch.,
Rossendorf, Ger. Dem. Rep.

SOURCE: Radiobiologia, Radiotherapia (1986), 27(2), 225-8

CODEN: RDBGAT; ISSN: 0033-8184

DOCUMENT TYPE: Journal

LANGUAGE: German

AB To analyze the hepatobiliary function in hyperbilirubinemia, a kit for the prepn. of ^{99m}Tc -Sn-N-(p-butylacetanilido)iminodiacetate (BIBA) was developed. In analogy to ROTOP-2,6-diethylacetanilidoiminodiacetic acid-(EHIDA), its **lyophilizate** contains equal portions in wt. of **ligand**, $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$, and ascorbic acid according to labeling mixt. In conformity with electrophoretic and chromatog. investigations as well as distribution studies in animals, the pH optimum is in the range 6.0-6.5 for the prepn. of ^{99m}Tc -Sn-BIDA. A comparison of ^{99m}Tc -Sn-BIDA with ^{99m}Tc -Sn-EHIDA shows significant differences in some estg. criteria.

CC 8-9 (Radiation Biochemistry)

Section cross-reference(s): 14

- IT **32025-58-4DP**, tin-butylacetanilidoiminodiacetate complexes
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of metastable, for hepatobiliary function assessment in hyperbilirubinemia)
- IT **7440-31-5DP**, technetium-99m-butylacetanilidoiminodiacetate complexes 66292-52-2DP, technetium-99m-tin complexes
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for hepatobiliary function assessment in hyperbilirubinemia)
- L29 ANSWER 31 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1985:533919 HCAPLUS
DOCUMENT NUMBER: 103:133919
TITLE: Complexes of technetium with polyhydric **ligands**
AUTHOR(S): Hwang, Lydia L. Y.; Ronca, Nicholas; Solomon, Nathan A.; Steigman, Joseph
CORPORATE SOURCE: Dep. Radiol., Downstate Med. Cent., Brooklyn, NY, 11203, USA
SOURCE: International Journal of Applied Radiation and Isotopes (1985), 36(6), 475-80
CODEN: IJARAY; ISSN: 0020-708X
DOCUMENT TYPE: Journal
LANGUAGE: English
- AB Polyhydric complexes of Tc(V) show absorption bands near 500 nm, with molar absorptivity coeffs. of .apprx.100. The shorter-chain compds. like ethylene glycol produce complexes which quickly disproportionate to Tc(IV) (as TcO₂) and Tc(VII) (as TcO₄⁻) on acidification. The longer-chain **ligands** like mannitol and gluconate do not. However, whereas the mannitol complex shows no change in spectrum from pH 12 to 3, the gluconate and **glucoheptonate** compds. show a definite spectral change on acidification, starting at pH 5. Electrophoresis similarity showed a change in mobility with pH for Tc-**glucoheptonate**, but none for Tc-mannitol. The carboxylic acid group of **glucoheptonate** was not binding the Tc. In 25m choline chloride the **glucoheptonate**-Tc mol ratio was 1:1 or less. A similar result emerged from a similar expt. in methylcellosolve as solvent.
- CC 78-7 (Inorganic Chemicals and Reactions)
- ST technetium 5 polyhydric **ligand** disproportionation; sugar technetium 5; alc polyhydric technetium 5; glycol technetium 5; mannitol technetium 5; gluconate technetium 5; **glucoheptonate** technetium 5
- IT Disproportionation
(of technetium pentavalent complexes with polyhydric **ligands**)
- IT **14133-76-7DP**, complexes with polyhydric **ligands**
RL: PREP (Preparation)
(formation, electrophoresis, disproportionation and electronic spectra of pentavalent)
- IT **7772-99-8**, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(redn. by, of pertechnetate in presence of polyhydric **ligands**)

L29 ANSWER 32 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1985:529030 HCAPLUS
DOCUMENT NUMBER: 103:129030

TITLE: Technetium-99m bone scanning agents - I. Influence of experimental conditions on the formation and gel chromatography of technetium-99m-(tin) **pyrophosphate** complexes

AUTHOR(S): Kroesbergen, J.; Gelsema, W. J.; De Ligny, C. L.

CORPORATE SOURCE: Lab. Anal. Chem., Univ. Utrecht, Utrecht, 3522 AD, Neth.

SOURCE: International Journal of Nuclear Medicine and Biology (1985), 12(2), 83-8
CODEN: IJNMCI; ISSN: 0047-0740

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The conversion of 99mTcO_4^- to $99\text{mTc}(\text{Sn})$ **pyrophosphate** complexes were studied under various exptl. conditions. An increase of the Sn(II) concn. had a beneficial effect, whereas the **ligand** concn. had little effect. The pH had only a small effect over the range 2-8. Raising the pH to 10 resulted in the partial decompn. of the complexes, which could be reversed by lowering the pH. Furthermore, the occurrence of various complexes was studied by means of gel chromatog. on Biogel P-4 as a function of pH and of the Sn(II) and **pyrophosphate** concns. Four major fractions were found. A single prepn. contained, however, no more than 2 major fractions. The formation of the different complexes was mainly governed by the pH and the **ligand** concn. The effect of the eluent on the decompn. and interconversion of the complexes during chromatog. was also studied. The eluent should have the same compn. (except for 99mTcO_4^-) as the reaction mixt.

CC 63-8 (Pharmaceuticals)

ST technetium 99m **pyrophosphate** bone scintigraphy; tin technetium 99m **pyrophosphate** bone

IT Bone
(scintigraphy of, technetium-99-labeled **pyrophosphate** for, tin in relation to)

IT Scintigraphy
(technetium-99-labeled **pyrophosphate** for, of bone, tin in relation to)

IT 2466-09-3DP, technetium-99 complexes **14133-76-7DP**, **pyrophosphate** complexes
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and gel chromatog. of metastable, for bone scintigraphy, tin effect on)

IT **7440-31-5**, biological studies
RL: BIOL (Biological study)
(technetium-99-labeled **pyrophosphate** complexes for bone scintigraphy in relation to)

L29 ANSWER 33 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1984:517741 HCAPLUS

DOCUMENT NUMBER: 101:117741

TITLE: New **multidentate ligands**. XXV.
The coordination chemistry of divalent metal ions with diglycolic acid, carboxymethyltartronic acid and ditartronic acid

AUTHOR(S): Motekaitis, Ramunas J.; Martell, Arthur E.

CORPORATE SOURCE: Dep. Chem., Texas A and M Univ., College Station, TX, 77843, USA

SOURCE: Journal of Coordination Chemistry (1984), 13(3), 265-71

CODEN: JCCMBQ; ISSN: 0095-8972

DOCUMENT TYPE: Journal
LANGUAGE: English

AB Potentiometric detns. of protonation consts. and metal binding consts. of ether polycarboxylate **ligands** (diglycolic, carboxymethyltartronic, and ditartronic acid) are reported. The magnitudes of the equil. consts. are discussed in terms of the functional groups present. Competition between ditartronic acid and NTA for Ca(II) demonstrates that the ether polycarboxylates are particularly effective as sequestering agents in weakly to moderately acid solns.

CC 68-3 (Phase Equilibriums, Chemical Equilibriums, and Solutions)
Section cross-reference(s): 66

IT Functional groups
(in ether polycarboxylate **ligands**, stability consts. of complexes with divalent metals in relation to)

IT Formation constant and Stability constant
(of divalent metal complexes with ether polycarboxylate **ligands**)

IT 7439-89-6D, complexes with ether polycarboxylate 7439-92-1D, complexes with ether polycarboxylate 7439-95-4D, complexes with ether polycarboxylate **7439-96-5D**, complexes with ether polycarboxylate 7440-02-0D, complexes with ether polycarboxylate 7440-24-6D, complexes with ether polycarboxylate **7440-31-5D**, complexes with ether polycarboxylate 7440-43-9D, complexes with ether polycarboxylate 7440-48-4D, complexes with ether polycarboxylate 7440-50-8D, complexes with ether polycarboxylate 7440-66-6D, complexes with ether polycarboxylate 7440-70-2D, complexes with ether polycarboxylate
RL: PRP (Properties)
(stability consts. of)

L29 ANSWER 34 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1983:441559 HCAPLUS
DOCUMENT NUMBER: 99:41559
TITLE: Solvent extraction of base metals by mixtures of organophosphoric acids and nonchelating oximes
AUTHOR(S): Preston, John S.
CORPORATE SOURCE: Council. Miner. Technol., Randburg, 2125, S. Afr.
SOURCE: Hydrometallurgy (1983), 10(2), 187-204
CODEN: HYDRDA; ISSN: 0304-386X

DOCUMENT TYPE: Journal
LANGUAGE: English

AB The effect of nonchelating oximes on the extn. of metals by phosphate diesters (H₂A₂) in xylene was investigated. Synergistic enhancement of extn. of divalent transition metal ions was found with oximes of aliph. aldehydes. The enhancement of extn. increased in the order VO₂⁺ < Cr²⁺ < Mn²⁺ < Fe²⁺ < Co²⁺ < Cu²⁺ < V²⁺ < Ni²⁺. Large synergistic effects were also found for Cu(I) and Ag(I). Among the divalent nontransition metals studied (Mg, Ca, Zn, Ce, Sn, and Pb), only Ce showed a synergistic effect. No synergism was found for any of the trivalent metal ions studied (Fe, Cr, V, Al, Bi, La, Ce, and Nd. The extd. complexes of Cu, Co, and Ni were octahedral in structure, with the compns. Cu(HA₂)₂(oxime)₂, Co(HA₂)₂(oxime)₂, and NiA(HA₂)(oxime)₃, resp., in which HA₂⁻ acts as a **bidentate ligand**. Extn. rates were rapid, even for Ni. Complete stripping of metal-loaded org. phases was effected by contact with 0.5 M mineral acid. Some practical applications, such as the recovery of Ni from acidic leach liquors, are discussed.

CC 54-2 (Extractive Metallurgy)

Section cross-reference(s): 68

IT 7429-90-5P, preparation 7439-89-6P, preparation 7439-91-0P,
preparation 7439-92-1P, preparation **7439-96-5P**, preparation
7440-00-8P, preparation 7440-02-0P, preparation **7440-31-5P**,
preparation 7440-43-9P, preparation 7440-45-1P, preparation
7440-47-3P, preparation 7440-48-4P, preparation 7440-50-8P,
preparation 7440-62-2P, preparation 7440-66-6P, preparation
7440-69-9P, preparation 7440-70-2P, preparation 20644-97-7
RL: PREP (Preparation)
(extn. of, from organophosphate solns. in xylene, nonchelating oximes
for enhanced)

L29 ANSWER 35 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1983:415446 HCAPLUS

DOCUMENT NUMBER: 99:15446

TITLE: Metal picrolonates

AUTHOR(S): Lorenzotti, Adriana; Cingolani, Augusto; Leonesi,
Dante; Bonati, FlavioCORPORATE SOURCE: Dip. Sci. Chim., Univ. Studi Camerino, Camerino,
62032, ItalySOURCE: Synthesis and Reactivity in Inorganic and
Metal-Organic Chemistry (1983), 13(3), 263-78
CODEN: SRIMCN; ISSN: 0094-5714

DOCUMENT TYPE: Journal

LANGUAGE: English

AB VOL2H2O, HOCrL2, ML2.nH2O (M = Mn, Fe, Co, Ni, Cu, Zn, n = 0.5-2), HOZnL,
HOSnL3, TlL, Me2TlL and Et2TlL (LH = picrolonic acid) were prepd. and
characterized through anal., IR, and magnetic susceptibility data. The
compds. are insol. in common solvents except DMSO where solvation takes
place. Some of the compds. are remarkably stable thermally, but some also
deflagrate. L acts as a unineg., possibly **bidentate**
ligand coordinating with O(5) and 1 O of the 4-NO2 group. The
complexes are probably polymeric, except in DMSO.

CC 78-7 (Inorganic Chemicals and Reactions)

IT 550-74-3DP, thallium, tin and transition metal complexes 7439-89-6DP,
complexes with picrolonic acid **7439-96-5DP**, complexes with
picrolonic acid 7440-02-0DP, complexes with picrolonic acid
7440-28-0DP, complexes with picrolonic acid **7440-31-5DP**,
complexes with picrolonic acid 7440-47-3DP, complexes with picrolonic
acid 7440-48-4DP, complexes with picrolonic acid 7440-50-8DP,
complexes with picrolonic acid 7440-62-2DP, complexes with picrolonic
acid 7440-66-6DP, complexes with picrolonic acid
RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of)

L29 ANSWER 36 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1983:154248 HCAPLUS

DOCUMENT NUMBER: 98:154248

TITLE: Studies of the complex formation of technetium(IV)
with **aminopolycarboxylic** acids in aqueous
solution

AUTHOR(S): Seifert, S.; Noll, B.; Muenze, R.

CORPORATE SOURCE: Cent. Inst. Nucl. Res. Rossendorf, Dresden, 8051, Ger.
Dem. Rep.SOURCE: International Journal of Applied Radiation and
Isotopes (1982), 33(12), 1393-8
CODEN: IJARAY; ISSN: 0020-708X

DOCUMENT TYPE: Journal

LANGUAGE: English

- AB The complex formation of ^{99}Tc with **aminopolycarboxylic** acids was investigated both by reducing $^{99}\text{TcO}_4^-$ with SnCl_2 in aq. **aminopolycarboxylic** acid solns. and by **ligand** exchange reaction between K_2TcBr_6 and the **ligands** DTPA, EDTA, HEDTA, NTA, IDA, N-(2,6-diethylphenylcarbomoylmethyl)iminodiacetic acid. Pertchnetate was reduced to the 4+ or 3+ state dependent on pH and the **ligand** used. In all **ligand** solns. colorless and colored species were formed at Tc concns. $<10^{-3}\text{M}$. The sepn. of both species was possible by thin-layer chromatog. in $\text{MeOH}/\text{H}_2\text{O}$ on cellulose. At Tc concns. $>10^{-2}\text{M}$ only colored compds. were formed. Electrophoretic mobility studies, gel chromatog., ion exchange and UV/visible spectrophotometry showed that various colored Tc complexes were formed.
- CC 78-7 (Inorganic Chemicals and Reactions)
- ST technetium **aminopolycarboxylic** acid acid
- IT Reduction
(of pertchnetate, by stannous chloride in aq. **aminopolycarboxylic** acid solns.)
- IT Exchange reaction
(of potassium technetium bromide with **aminopolycarboxylic** acids in aq. solns.)
- IT **16903-71-2**
RL: RCT (Reactant); RACT (Reactant or reagent)
(exchange reaction of, with **aminopolycarboxylic** acids in aq. solns.)
- IT **7440-26-8DP**, **aminopolycarboxylic** acid complexes
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in aq. solns.)
- IT **7772-99-8**, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(redn. by, of pertchnetate in aq. **aminopolycarboxylic** acid solns.)
- IT **14333-20-1**
RL: RCT (Reactant); RACT (Reactant or reagent)
(redn. of, by stannous chloride in aq. **aminopolycarboxylic** acid solns.)

L29 ANSWER 37 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1981:218838 HCAPLUS

DOCUMENT NUMBER: 94:218838

TITLE: Metal-**ligand** bonding in benzeneseleninato complexes of p- and d-block metals

AUTHOR(S): Preti, Carlo; Tosi, Giuseppe; Zannini, Paolo

CORPORATE SOURCE: Ist. Chim. Gen. Inorg., Univ. Modena, Modena, 41100, Italy

SOURCE: Congr. Naz. Chim. Inorg., [Atti], 13th (1980), 171-3. Univ. Studi Camerino: Camerino, Italy.

CODEN: 45MJA6

DOCUMENT TYPE: Conference

LANGUAGE: English

- AB A no. of complexes $\text{Cr}(\text{III})$, $\text{Mn}(\text{II})$, $\text{Fe}(\text{III})$, $\text{Fe}(\text{II})$, $\text{Ru}(\text{III})$, $\text{V}(\text{III})$, $\text{OV}(\text{IV})$, and $\text{S}(\text{II})$ with para- and meta-substituted benzeneseleninic acids of the type $\text{XC}_6\text{H}_4\text{SeO}_2\text{H}$ ($\text{X} = \text{H}$, p-Cl, m-Cl, p-Br, m-Br, p-Me) are reported and characterized on the basis of far-IR and near-IR spectroscopy, electronic spectra and cond. measurements, as well as by magnetochem. studies. The wavelengths of the principal absorption peaks were accounted

for quant. in terms of the crystal field theory; the nephelauxetic parameters are all indicative of appreciable metal-ligand covalency. The IR spectral data suggest that the **ligands** act as **bidentate** in seleninato-O,O' complexes and octahedral geometries are proposed with D3 symmetry for the Cr(III), Fe(III), V(III) and Ru(III) derivs. and octahedral geometries distorted towards D4h for Mn(II) and Fe(II) complexes, in which the H2O is coordinated to the metal. The no. of bands in the IR spectra of the Sn(II) derivs. indicates that there is no equivalence in the manner in which the 2 seleninato **ligands** are bonded.

CC 78-7 (Inorganic Chemicals and Reactions)
 IT 6996-92-5DP, transition complexes 7439-89-6DP, complexes with benzeneseleninic acid **7439-96-5DP**, complexes with benzeneseleninic acid 7440-18-8DP, complexes with benzeneseleninic acid **7440-31-5DP**, complexes with benzeneseleninic acid 7440-47-3DP, complexes with benzeneseleninic acid 7440-62-2DP, complexes with benzeneseleninic acid 20753-52-0DP, transition complexes 20753-53-1DP, transition complexes 20825-08-5DP, transition complexes 33350-63-9DP, transition complexes 33350-65-1DP, transition complexes
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

L29 ANSWER 38 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1981:218831 HCAPLUS
 DOCUMENT NUMBER: 94:218831
 TITLE: Investigations on dithiocarbamate complexes of chromium(III), manganese(III), lead(II), tin(II) and osmium
 AUTHOR(S): Preti, Carlo; Tosi, Giuseppe; Zannini, Paolo
 CORPORATE SOURCE: Ist. Chim. Gen. Inorg., Univ. Modena, Modena, 41100, Italy
 SOURCE: Congr. Naz. Chim. Inorg., [Atti], 13th (1980), 94-6. Univ. Studi Camerino: Camerino, Italy.
 CODEN: 45MJA6
 DOCUMENT TYPE: Conference
 LANGUAGE: English

AB Piperidine-, morpholine-4-, N-methylpiperazine-4-, and thiomorpholine-4-carbodithioate complexes of Cr(III), Mn(III), Sn(II), Pb(II), Os(II), and Os(III) were prepd. and characterized by chem. anal., IR and electronic spectra, magnetic susceptibilities, cond. measurement, and mass spectra. The complexes were of the type M(R2dtc)_n, where n is the oxidn. no. of the metal ion. Where possible a tentative stereochem. of the complexes is discussed on the basis of the obtained results. The dithiocarbamate **ligands** are **bidentate** in all the complexes.

CC 78-7 (Inorganic Chemicals and Reactions)
 IT 98-99-7DP, complexes with transition metals, lead and tin 3581-30-4DP, complexes with transition metals, lead and tin 5430-77-3DP, complexes with transition metals, lead and tin 7439-92-1DP, complexes with piperidinecarbodithioic acid and related heterocyclic dithiocarbamates **7439-96-5DP**, complexes with piperidinecarbodithioic acid and related heterocyclic dithiocarbamates 7440-04-2DP, complexes with piperidinecarbodithioic acid and related heterocyclic dithiocarbamates **7440-31-5DP**, complexes with piperidinecarbodithioic acid and related heterocyclic dithiocarbamates 7440-47-3DP, complexes with piperidinecarbodithioic acid and related heterocyclic dithiocarbamates 21338-17-0P 45695-98-5DP, complexes with transition metals, lead and tin

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L29 ANSWER 39 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1981:43410 HCAPLUS

DOCUMENT NUMBER: 94:43410

TITLE: Complexes of technetium with hydroxycarboxylic acids:
gluconic, **glucoheptonic**, tartaric, and
citric

AUTHOR(S): Russell, Charles D.; Speiser, A. G.

CORPORATE SOURCE: Med. Cent., Univ. Alabama, Birmingham, AL, USA

SOURCE: Journal of Nuclear Medicine (1980), 21(11), 1086-90
CODEN: JNMEAQ; ISSN: 0022-3123

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Tc complexes of several hydroxycarboxylic acids are used for medical imaging. To det. the oxidn. state of Tc in these agents, the redn. of $^{99}\text{TcO}_4^-$ in 0.1M solns. of 4 hydroxycarboxylic acids was studied using polarog. and amperometric titrn. with Sn(II). In D-gluconate below pH 6, Tc(III) and Tc(V) were identified with certainty, Tc(IV) questionably. At pH 6-10, Tc(IV) and Tc(V) were formed. Above pH 10, Tc(III), Tc(IV), and Tc(V) were formed. At D-**glucoheptonate** below pH 6, Tc(III) and Tc(V), and questionably Tc(IV); at pH 6-10, Tc(V); and above pH 10, Tc(III), Tc(V), and probably Tc(IV). In L-tartrate below pH 6, Tc(III), Tc(IV), and Tc(V) were formed and above pH 6, Tc(IV) and Tc(V). In citrate below pH 10, Tc(III), Tc(IV), and Tc(V) were formed and above pH 10, Tc(IV) and Tc(V). For all 4 **ligands**, the initial product of redn. by Sn(II) at pH 3-9 was Tc(V). In freshly prepd. Sn-labeled imaging agents of this class, the oxidn. state is probably Tc(V). Lower stable oxidn. states exist, attainable by using reducing agents stronger than Sn; these may show altered imaging properties.

CC 8-13 (Radiation Biochemistry)

IT 77-92-9D, technetium-99 tin complexes 87-69-4D, technetium-99 tin complexes 87-74-1D, technetium-99 tin complexes 526-95-4D, technetium-99 tin complexes **7440-31-5D**, technetium-99-hydroxycarboxylic acid complexes **14133-76-7D**, tin-hydroxycarboxylic acid complexes

RL: BIOL (Biological study)

(valence of technetium-99 in, scintigraphy in relation to)

L29 ANSWER 40 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1981:43397 HCAPLUS

DOCUMENT NUMBER: 94:43397

TITLE: Binding of technetium-99m to plasma proteins:
influence on the distribution of Tc-99m phosphate
agents

AUTHOR(S): Schuemichen, C.; Koch, K.; Kraus, A.; Kuhlicke, G.;
Weiler, K.; Wenn, A.; Hoffman, G.

CORPORATE SOURCE: Albert-Ludwigs-Univ., Freiburg/Br., Fed. Rep. Ger.

SOURCE: Journal of Nuclear Medicine (1980), 21(11), 1080-5
CODEN: JNMEAQ; ISSN: 0022-3123

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Plasma protein binding of $^{99\text{m}}\text{Tc}$ was assessed in man after injection of various $^{99\text{m}}\text{Tc}$ -labeled bone imaging agents. Of the 5 methods in which plasma proteins were pptd. to det. protein binding, no correlation among them could be established. The $(\text{NH}_4)_2\text{SO}_4$ method seemed to correlate well

with dialysis filtration. Plasma obtained from patients injected with ^{99m}Tc phosphate compds. was reinjected to rats. The bone uptake in these animals correlated linearly with the unbound activity in the injected plasma. Provided that no protein binding would occur, the bone uptake as well as the urinary excretion proved to be identical for ^{99m}Tc -labeled ethane-1-hydroxy-1,1-diphosphonate, methylenediphosphonate, and **pyrophosphate** (PPi). Electrophoresis of ^{99m}Tc -PPi indicated that the intact complex may be uncharged, whereas at low **ligand** concns. uncharged as well as neg. charged ^{99m}Tc species are formed. Better methods are needed to establish the presence of various ^{99m}Tc species and their relative role in the kinetics of these compds., and plasma protein binding.

CC 8-6 (Radiation Biochemistry)

IT **14133-76-7D**, tin-phosphate complexes

RL: BIOL (Biological study)

(binding of metastable, to proteins of blood plasma, scintigraphy in relation to)

IT 1984-15-2D, technetium-99-tin complexes 2466-09-3D, technetium-99-tin complexes 2809-21-4D, technetium-99-tin complexes **7440-31-5D**, technetium-99-phosphate complexes

RL: BIOL (Biological study)

(binding of, to proteins of blood plasma, scintigraphy in relation to)

L29 ANSWER 41 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1981:26837 HCAPLUS

DOCUMENT NUMBER: 94:26837

TITLE: Exchange labeling of proteins: ^{99m}Tc -labeled transferrin

AUTHOR(S): Paik, C. H.; Vieras, F.; Eckelman, W. C.; Reba, R. C.

CORPORATE SOURCE: Radiopharm. Chem., George Washington Univ., Washington, DC, USA

SOURCE: Journal of Radioanalytical Chemistry (1980), 60(1), 281-9

CODEN: JRACBN; ISSN: 0022-4081

DOCUMENT TYPE: Journal

LANGUAGE: English

AB ^{99m}Tc -labeled transferrin was prepd. by redn. of $^{99m}\text{TcO}_4$ with Sn-DTPA or Sn citrate followed by equil. of the Tc chelate with human transferrin. The rate of transfer of ^{99m}Tc to transferrin in the presence of 0.015M citrate buffer was dependent on the pH: 2.1 > 7.2 > 4.1 > 5.9. The incorporation rate was inversely proportional to the concn. of DTPA and citrate buffer. The replacement of citrate buffer by acetate or oxalate buffer reduced drastically the formation of ^{99m}Tc -labeled transferrin at pH 4.1. The formation of ^{99m}Tc -labeled transferrin prepd. from the redn. of $^{99m}\text{TcO}_4$ with Sn citrate was faster than that from the redn. with Sn-DTPA in the presence of 0.015M citrate buffer at pH 2.5. Equilibration of transferrin with ^{99m}Tc **pyrophosphate** did not produce ^{99m}Tc -labeled transferrin at pH 4.5. The **ligand** exchange labeling of ^{99m}Tc to transferrin in 0.015M citrate did not cause appreciable denaturation of the protein at all pH values. This method also enabled labeling of the protein in a low concn. via Sn redn. Sequential external imaging with ^{99m}Tc -labeled transferrin in Sprague-Dawley rats bearing Walker-256 carcinosarcomas showed optimal tumor localization occurred at 3 h after injection. In spite of this, ^{99m}Tc -labeled transferrin does not appear to be a suitable imaging agent because of the low tumor-to-blood ratio of ^{99m}Tc (0.50) at 3 h postinjection. This is similar to that of ^{67}Ga citrate (0.43%).

CC 8-1 (Radiation Biochemistry)
 IT **14133-76-7DP**, transferrin complexes
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and metab. of metastable, scintigraphy and neoplasms in
 relation to)
 IT 67-43-6D, tin complexes **7772-99-8**, reactions 15578-26-4
 52033-76-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (redn. by, of pertechnetate)
 IT **23288-61-1**
 RL: BIOL (Biological study)
 (redn. of metastable, by tin)

L29 ANSWER 42 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1981:7788 HCAPLUS
 DOCUMENT NUMBER: 94:7788
 TITLE: Albumin microaggregates for radioactive scanning of
 reticuloendothelial systems
 INVENTOR(S): Saklad, Eugene L.
 PATENT ASSIGNEE(S): New England Nuclear Corp., USA
 SOURCE: U.S., 12 pp. Cont.-in-part of U.S. 4,094,965.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4226846	A	19801007	US 1978-898292	19780420
CA 1109392	A1	19810922	CA 1978-299753	19780323
CA 1112162	A1	19811110	CA 1979-319662	19790115
US 4337240	A	19820629	US 1979-18312	19790307
CH 644019	A	19840713	CH 1979-3709	19790419
BE 883114	A1	19801105	BE 1980-470	19800505
PRIORITY APPLN. INFO.:			US 1977-783633	19770401
			US 1978-783633	19780401
			US 1978-898292	19780420

AB Stable biodegradable compns. for radioactively imaging the
 reticuloendothelial system, particularly bone marrow, liver and spleen,
 were obtained by microaggregating anaerobically human serum albumin in the
 presence of a stannous reducing agent preferably formed in the presence of
 a stabilizing **ligand**, and either labeled with ^{99m}Tc directly or
 freeze-dried and stored until ready for use and then labeled. Thus, a
 formulation was prepd. by adding to mixing low O water purified human
 serum albumin 16.3, SnCl₂ 2.5, and 1% Pluronic F-68 3 mL, mixing, followed
 by addn. of 1% Na **pyrophosphate** 25.6 mL, the soln. filtered
 through an 0.22 .mu.m sterilizing membrane, the pH adjusted to 5.62, and
 heated for 3.5 min at 99.degree. to form microaggregates dispersed into
 vials and labeled with 5 mL ^{99m}Tc-Na pertechnetate. The compn. showed
 good imaging of bone marrow, liver, and spleen in monkeys.
 IC A61K029-00; A61K043-00; C07G007-00
 NCL 424001000
 CC 63-8 (Pharmaceuticals)
 IT **14133-76-7**, biological studies
 RL: BIOL (Biological study)
 (labeling of microaggregated albumins by, for scintigraphy of

reticuloendothelial system)
IT 7772-99-8, biological studies 25681-89-4
RL: BIOL (Biological study)
(scintigraphy compn. contg., for reticuloendothelial system)

L29 ANSWER 43 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1980:421675 HCAPLUS

DOCUMENT NUMBER: 93:21675

TITLE: Relationship between complex stability and biokinetics
of technetium-99m-phosphate compounds

AUTHOR(S): Schuemichen, C.; Koerfgen, T.; Hoffmann, G.

CORPORATE SOURCE: Abt. Klin. Nuklearmed., Albert-Ludwigs-Univ.,
Freiburg/Br., Fed. Rep. Ger.

SOURCE: Nuklearmedizin (Stuttgart) (1980), 19(1), 7-10
CODEN: NUKLDV; ISSN: 0029-5566

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The complex inertness of 99mTc-hydroxyethylidenediphosphonate (EHDP),
-methylenediphosphonate (MDP), -**pyrophosphate** (PPI), and
-tripolyphosphate (TriP) was detd. in vitro by means of protein binding of
99mTc after diln. in a phosphate-buffered albumin soln. Com. available
kits were used. In vitro, 99mTc-EHDP was the most stable complex. The
biodistribution of these agents was evaluated in the adult rat; here, the
less stable 99mTc-MDP proved to be the superior bone imaging agent. It is
suggested that the complex inertness and the bone affinity are opposing
properties of the 99mTc-phosphate compds., because the complex must
hydrolyze before the phosphate compd. and Tc (IV) are deposited sep. in
bone. Hence, bone imaging with 99mTc-phosphate compds. demands a
compromise concerning the stability of these complexes at low
ligand concns., which among the investigated agents is best
accomplished by 99mTc-MDP.

CC 8-1 (Radiation Biochemistry)

IT 14133-76-7D, tin-phosphate complexes

RL: BIOL (Biological study)

(stability and biokinetics of metastable, bone scintigraphy in relation
to)

IT 1984-15-2D, technetium-99-tin complexes 2809-21-4D, technetium-99-tin
complexes 7440-31-5D, technetium-99-phosphate complexes
14000-31-8D, technetium-99-tin complexes 14127-68-5D, technetium-99-tin
complexes

RL: BIOL (Biological study)

(stability and biokinetics of, bone scintigraphy in relation to)

L29 ANSWER 44 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1980:66786 HCAPLUS

DOCUMENT NUMBER: 92:66786

TITLE: Oxidation state of technetium in bone scanning agents

AUTHOR(S): Russell, Charles D.; Cash, Anna G.

CORPORATE SOURCE: VA Univ. Med. Cent., Birmingham, AL, USA

SOURCE: Radiopharm. 2, Proc. Int. Symp., 2nd (1979), 627-35.
Editor(s): Sorenson, James A. Soc. Nucl. Med., Inc.:
New York, N. Y.

CODEN: 42GGAE

DOCUMENT TYPE: Conference

LANGUAGE: English

AB The oxidn. state of Tc was identified by polarog. after electrolytic redn.
of pertechnetate in complexing media of **pyrophosphate**,

methylenediphosphonate (MDP), and 1-ethane-1-hydroxy-1-diphosphonate (EHDP). In the same media the oxidn. state was identified resulting from redn. with Sn(II) by means of amperometric titrn. The stable states resulting from electrolytic redn. were Tc(III) and Tc(IV) below pH 6, and Tc(IV) and Tc(V) above pH 10, for all 3 **ligands**. Between pH 6 and 10, the results depended on the **ligand** present. Tc(III) and Tc(IV) were identified in **pyrophosphate** and MDP, while in EHDP Tc(II) and Tc(V) were identified with certainty, but Tc(IV) questionably. Though 2 stable products thus resulted from electrolytic redn. at each pH, redn. with Sn gave only a single product, which was always Tc(IV) except in EHDP, where Tc(V) was formed in neutral or alk. soln.

CC 72-12 (Electrochemistry)

Section cross-reference(s): 1, 8, 63, 71

ST oxidn state technetium bone scanning; valence technetium bone scanning agent; electrolytic redn technetium complexing soln; **pyrophosphate** technetium electroredn; diphosphonate technetium electroredn; tin redn technetium complex; phosphonate di technetium electroredn

IT 7440-26-8, properties

RL: PRP (Properties)

(oxidn. state of, in bone scanning agents)

IT 7440-31-5, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(redn. by, of pertechnetate, oxidn. state of technetium in relation to)

IT 14333-20-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(redn. of, electrochem., in complexing media, oxidn. state of technetium in relation to)

L29 ANSWER 45 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1977:64820 HCAPLUS

DOCUMENT NUMBER: 86:64820

TITLE: Structural characterization of a bridged technetium-99-tin-dimethylglyoxime complex: Implications for the chemistry of technetium-99-labeled radiopharmaceuticals prepared by the tin(II) reduction of pertechnetate

AUTHOR(S): Deutsch, Edward; Elder, R. C.; Lange, Bruce A.; Vaal, M. J.; Lay, Dennis G.

CORPORATE SOURCE: Dep. Chem., Univ. Cincinnati, Cincinnati, OH, USA

SOURCE: Proceedings of the National Academy of Sciences of the United States of America (1976), 73(12), 4287-9
CODEN: PNASA6; ISSN: 0027-8424

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Redn. of pertechnetate by Sn(II) in the presence of dimethylglyoxime is shown, by single crystal x-ray anal., to yield a Tc-Sn-dimethylglyoxime complex in which Sn and Tc are intimately connected by a triple bridging arrangement. One bridge consists of a single O atom and it is hypothesized that this bridge arises from the inner sphere redn. of Tc by Sn(II), the electrons being transferred through a Tc "yl" O which eventually becomes the bridging atom. Two addnl. bridges arise from 2 dimethylglyoxime **ligands** that function as **bidentate** N donors towards Tc and monodentate O donors towards Sn. The Sn atom can thus be viewed as providing a 3-pronged "cap" on 1 end of the Tc-dimethylglyoxime complex. The addnl. coordination sites around Tc are occupied by the 2 nitrogens of a 3rd dimethylglyoxime **ligand**, making Tc 7-coordinate. The addnl. coordination sites around Sn are

occupied by 3 chloride anions, giving the Sn a fac octahedral coordination environment. From indirect evidence the oxidn. states of Sn and Tc are tentatively assigned to be IV and V, resp. Since most ^{99m}Tc -radiopharmaceuticals are synthesized by the Sn(II) redn. of pertechnetate, it is likely that the Sn-O-Tc linkage described in this work is an important feature of the chem. of these species. This linkage also provides a ready rationale for the close assocn. of Sn and Tc obsd. in many ^{99m}Tc -radiopharmaceuticals.

CC 78-7 (Inorganic Chemicals and Reactions)

Section cross-reference(s): 63, 75

IT 62111-81-3P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and crystal structure of)

IT 14133-76-7, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)
(radiopharmaceuticals contg., prepn. by divalent tin redn.)

IT 7440-31-5, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)
(redn. by divalent, of pertechnetate- ^{99}Tc)

IT 23288-61-1

RL: RCT (Reactant); RACT (Reactant or reagent)
(redn. of, by divalent tin)

L29 ANSWER 46 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1976:144047 HCAPLUS

DOCUMENT NUMBER: 84:144047

TITLE: Synthesis and Moessbauer spectra of six-co-ordinate tin-metal compounds: quotient of the partial quadrupole splittings of the six- and four-co-ordinate species

AUTHOR(S): Bancroft, G. Michael; Sham, T. K.

CORPORATE SOURCE: Dep. Chem., Univ. West. Ontario, London, ON, Can.

SOURCE: Journal of the Chemical Society, Dalton Transactions:
Inorganic Chemistry (1972-1999) (1976), (5), 467-73
CODEN: JC DTBI; ISSN: 0300-9246

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Nine 6-coordinate Sn(IV) compds. $\text{M}(\text{SnCl}_3\text{L})$ [$\text{M} = \text{Mn}(\text{CO})_5$, $\text{Mn}(\text{CO})_4(\text{PPh}_3)$, $\text{Fe}(\text{C}_5\text{H}_5)(\text{CO})_2$, $\text{C}_5\text{H}_5 = \eta^5\text{-cyclopentadienyl}$; $\text{L} = 1,10\text{-phenanthroline}$, $2,2'\text{-bipyridyl}$], $\text{M}(\text{SnRL}_2)$ ($\text{R} = \text{Cl}$, Ph ; $\text{L} = 2,4\text{-pentanedionate}$, 8-quinolinolate), and $\text{M}(\text{SnPhCl}_2\text{L})$ ($\text{L} = 1,10\text{-phenanthroline}$) were prepd. Structures for these and similar compds. were assigned using CO ir stretching frequencies and ^{119}Sn Moessbauer quadrupole splittings. Partial quadrupole splittings for 6-coordinate species, (p.q.s.)Loct, correlated linearly (R 0.991) with tetrahedral values: (p.q.s.)Loct = $0.73(\text{p.q.s.})\text{Ltet} - 0.01$. The gradient of 0.73 is compared with 0.67, the value calcd. from simple MO arguments (Clark, M. G., et al., 1972). As in 4-coordinate compds., the order of p-donor strength in 6-coordination is $\text{Mo}(\text{C}_5\text{H}_5)(\text{CO})_3 < \text{Mn}(\text{CO})_5 < \text{Mn}(\text{CO})_4(\text{PPh}_3) \approx \text{Fe}(\text{C}_5\text{H}_5)(\text{CO})_2 < \text{Ph} < \text{Me}$ and the M-Sn bonds have higher Sn 5s character than Me-Sn or Ph-Sn bonds.

CC 78-7 (Inorganic Chemicals and Reactions)

Section cross-reference(s): 73

IT 20519-30-6

RL: RCT (Reactant); RACT (Reactant or reagent)
(Moessbauer spectrum and reactions with **bidentate ligands**)

IT 7439-89-6, properties 7439-96-5, properties 7439-98-7,

properties
 RL: PRP (Properties)
 (bonds of, with tin)
 IT 7440-31-5, properties
 RL: PRP (Properties)
 (bonds of, with transition metals)
 IT 16165-09-6 16165-15-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reactions of, with **bidentate ligands**)

L29 ANSWER 47 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1966:2597 HCAPLUS
 DOCUMENT NUMBER: 64:2597
 ORIGINAL REFERENCE NO.: 64:409b-d
 TITLE: Covering surfaces, consisting of zinc or zinc alloys
 PATENT ASSIGNEE(S): Metallgesellschaft A.-G.
 SOURCE: 15 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 6410769		19650324	NL	

PRIORITY APPLN. INFO.: US 19630923

AB Surfaces, consisting of Zn or Zn alloys, which must be painted, are treated with a soln. contg. an alk. compd. (I), ions of 1 or more metals (not an alkali metal) (II), and a compd., which keeps II in soln. by forming complexes. I can be triethanolamine, alkali metal hydroxide, carbonate, phosphate, borate, silicate, polyphosphate, and (or) **pyrophosphate**. The pH of the soln. must be 12.6-13.3 II can be Ag, Mg, Cd, Al, Sn, Ti, Sb, Mo, Cr, Ce, W, Mn, Co, Fe, or Ni. The soln. must contain >0.02 g./l. of II. The results are better, when 2 or more metals are combined. Most of the complexing agents being acid, Na salts are used to keep the pH high. Results can be improved by adding a surface-active compd. (<50 g./l.). The soln. can be applied by spraying, submerging, or brushing at 54-82.degree. for 30-90 sec. Thereafter the surface is washed with a soln. contg. 0.1-5 g./l. CrO3 (pH 3.8-6.8), rinsed with water, and dried. The surface can then be painted. When the surface consists partly of Zn or a Zn alloy and partly of Fe, it can be phosphatized after the alk. treatment.

IC C23F

CC 20 (Nonferrous Metals and Alloys)

IT Alkali metal carbonates
 Alkali metal phosphates
 Alkali metal **pyrophosphates**
 Alkali metal silicates
 Alkalies
Chelating agents, Complexing agents
 Surface-active substances
 Wetting agents
 (in coating of Zn and Zn alloys)

IT 7440-31-5, Tin 7440-33-7, Tungsten 7440-47-3, Chromium
 (coating with, on Zn and Zn alloys)

IT 50-21-5, Lactic acid 50-70-4, Glucitol 56-40-6, Glycine 69-72-7,
 Salicylic acid 77-92-9, Citric acid 87-69-4, Tartaric acid 88-99-3,

Phthalic acid 102-71-6, Ethanol, 2,2',2''-nitrilotri- 107-21-1,
Ethylene glycol 110-16-7, Maleic acid 110-17-8, Fumaric acid
526-95-4, Gluconic acid 5709-72-8, Phosphonamidic acid,
N,N-bis(2-hydroxyethyl)-P-methyl- 7429-90-5, Aluminum 7439-95-4,
Magnesium **7439-96-5**, Manganese 7439-98-7, Molybdenum
7440-22-4, Silver 7440-32-6, Titanium 7440-36-0, Antimony 7440-45-1,
Cerium 7440-48-4, Cobalt 25233-42-5, Heptonic acid, sodium salt
(in coating of Zn and Zn alloys)

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L30 61905 SEA FILE=WPIX ABB=ON PLU=ON TIN OR STANNOUS
 L31 239549 SEA FILE=WPIX ABB=ON PLU=ON MANGANESE OR MN OR TC OR
 TECHNETIUM OR RE OR RHENIUM
 L32 6677 SEA FILE=WPIX ABB=ON PLU=ON L30 AND L31
 L33 152 SEA FILE=WPIX ABB=ON PLU=ON L32 AND LIGAND
 L34 27 SEA FILE=WPIX ABB=ON PLU=ON L33 AND (LYOPHIL? OR PYROPHOS?
 OR GLUCEPT? OR GLUCOHEPT? OR AMINOPOLYCARBOX? OR MULTIDENT? OR
 BIDENT? OR TRIDENT? OR PERMETALLAT?)

=> d 134 ibib ab 1-27

L34 ANSWER 1 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
 ACCESSION NUMBER: 2004-058189 [06] WPIX
 DOC. NO. CPI: C2004-023909
 TITLE: Epoxidation of organic compounds uses catalyst comprising
 porous metal-organic framework material comprising metal
 ions and at least **bidentate** organic compounds
 that can coordinately bound to the metal ion.
 DERWENT CLASS: E13 J04
 INVENTOR(S): EDDAOUDI, M; HESSE, M; LOBREE, L; MUELLER, U; YAGHI, O M
 PATENT ASSIGNEE(S): (BADI) BASF AG; (UNMI) UNIV MICHIGAN
 COUNTRY COUNT: 27
 PATENT INFORMATION: .

PATENT NO	KIND	DATE	WEEK	LA	PG
US 6624318	B1	20030923	(200406)*		13
WO 2003101975	A1	20031211	(200407)	EN	
RW: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO					
SE SI SK TR					
W: US					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 6624318	B1	US 2002-157494	20020530
WO 2003101975	A1	WO 2003-EP5547	20030527

PRIORITY APPLN. INFO: US 2002-157494 20020530

AB US 6624318 B UPAB: 20040123

NOVELTY - Organic compounds are epoxidized by reacting organic compound(s) with epoxidizing agent(s) in the presence of a catalyst. The catalyst comprises a porous metal-organic framework material comprising metal ion(s) and at least **bidentate** organic compound(s) that can coordinately bound to the metal ion.

USE - For the epoxidation of organic compounds.

ADVANTAGE - The invention uses a catalyst containing materials in addition to or instead of catalytic materials, e.g. zeolites, for the reaction of organic compounds with oxygen and/or oxygen-delivering compounds.

Dwg.0/0

L34 ANSWER 2 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
 ACCESSION NUMBER: 2003-689623 [65] WPIX
 DOC. NO. CPI: C2003-189108
 TITLE: Radio-labelling a biomolecule useful for treatment of
 e.g. cancer involves contacting biomolecule with
 radionuclide in presence of weak transfer **ligand**

DERWENT CLASS: B04 K08
 INVENTOR(S): SMITH, T; WALTON, P
 PATENT ASSIGNEE(S): (VIST-N) VISTATEC YORK LTD
 COUNTRY COUNT: 102
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2003068270	A1	20030821	(200365)*	EN	22
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT SD SE SI SK SL SZ TR TZ UG ZM ZW W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW					
GB 2388605	A	20031119	(200401)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2003068270	A1	WO 2003-GB548	20030207
GB 2388605	A	GB 2003-3005	20030211

PRIORITY APPLN. INFO: GB 2002-15511 20020705; GB 2002-3330
 20020212

AB WO2003068270 A UPAB: 20031009

NOVELTY - Radio-labelling a biomolecule involves contacting the
 biomolecule with radionuclide in the presence of a weak transfer
ligand.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for;
 (1) a kit comprising a biomolecule, radionuclide and a weak transfer
ligand and optionally a set of written instructions;

(2) a radionuclide-labelled product;

(3) a product comprising **technetium** labelled iron transport
 protein (preferably lactoferrin) coupled to a chemotherapeutic agent;

(4) a composition comprising lactoferrin, radiolabelled lactoferrin
 or **technetium** labelled lactoferrin coupled to a chemotherapeutic
 agent;

(5) diagnosing the presence of a tumor involving administering a
technetium labelled lactoferrin product and imaging the labelled
 product in the body; and

(6) treatment of tumor involving administering a composition
 comprising a chemotherapeutic or gene therapy agent coupled to
technetium labelled transferrin or lactoferrin.

ACTIVITY - Cytostatic.

MECHANISM OF ACTION - None given.

USE - In the manufacture of a medicament for the treatment of cancer

and tumor (claimed) e.g. breast cancer, bladder carcinoma, lung and heart tumor.

ADVANTAGE - The method removes extraneous radionuclide material, leading to high labelling efficiencies and pure radionuclide-labelled materials and improves purity of radio-labelled.
Dwg.0/11

L34 ANSWER 3 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2003-300530 [29] WPIX
DOC. NO. NON-CPI: N2003-239161
DOC. NO. CPI: C2003-078227
TITLE: Metal compounds as precursors for growth of lead scandium tantalate by metal oxide chemical vapor deposition (MOCVD), using beta-diketonate group containing aryl group or its substituted derivative as its **ligand** (s).
DERWENT CLASS: E12 L03 M13 S03 U11 U14 W07
INVENTOR(S): ANTHONY, C J
PATENT ASSIGNEE(S): (INOR-N) INORGTECH LTD
COUNTRY COUNT: 101
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2003014134	A1	20030220	(200329)*	EN	31
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2003014134	A1	WO 2002-GB3657	20020807

PRIORITY APPLN. INFO: GB 2001-19224 20010807

AB WO2003014134 A UPAB: 20030505

NOVELTY - Metal compounds comprise a beta -diketonate group containing an aryl group or its substituted derivative as at least one of its **ligands**. Precursor degradation is overcome by using single solution of Pb(thd)₂, Sc(thd)₃ and Ta(OEt)₅ dissolved in tetrahydrofuran.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for:

(a) a method of making the inventive metal compounds, which comprises reacting a metal salt or a metal compound with a first **ligand** with the beta -diketonate or its salt; and

(b) a method of depositing metal oxides by metalorganic chemical vapor deposition (MOCVD) using the inventive metal compound precursors.

USE - Used as precursors for depositing metal oxides by MOCVD.

Pb(dbm)₂ and its adducts with donor **ligands**, e.g. crown ethers, are used with scandium and tantalum precursors for deposition of Pb(Sc_{0.5}, Ta_{0.5})O₃ or with zirconium and titanium precursors for deposition of Pb(Zr, Ti)O₃. La(dbm)₃(L) is used with a **manganese** precursor for

deposition of LaMnO₃ or with a nickel precursor for deposition of LaNiO₃. Ni(dbm)₂ is used as a precursor for deposition of LaNiO₃. Ti(isopropoxy)₂(dbm)₂ is used in the deposition of TiO₂, (Ba, Sr)TiO₃ (BST), or Pb (Zr, Ti)O₃ (PZT). Cu(II)(dbm)₂ or Cu(I)(dbm)(L) is used as a precursor for depositing copper oxide or copper films. Me₂In(dbm) is used as a precursor for depositing indium oxide layers alone or with tin. Ta(OEt)₄(dbm) is used as a precursor for deposition of Pb(Sc_{0.5}, Ta_{0.5})O₃ or for deposition of SrBi₂Ta₂O₉ or Ta₂O₅. Nb(OEt)₄(dbm) is used as a precursor MOCVD of Pb(Mg_{0.33}Nb_{0.33})O₃, SrBi₂(TaxNb_{1-x})₂O₉ or niobium oxide. Zr(dbm)₄ is used as a precursor for deposition of ZrO₂ at high substrate temperatures. (All claimed). The lead scandium tantalate is very sensitive pyroelectric material which can be used in uncooled thermal imaging, including military night vision, fire detection, medical diagnosis and automotive vision enhancement.

ADVANTAGE - The use of the metal compounds improves the MOCVD process for the deposition of metal oxides. The MOCVD technique maintains the precursor solution at room temperature until point of use and minimizes thermal degradation of the precursor.

Dwg.0/7

L34 ANSWER 4 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
 ACCESSION NUMBER: 2003-229229 [22] WPIX
 CROSS REFERENCE: 2003-221259 [21]; 2003-229228 [22]
 DOC. NO. CPI: C2003-058797
 TITLE: Co-ordination catalyst system for polymerizing olefins, is formed by simultaneously contacting support-activator agglomerate particles with pre-catalyst reactants in presence of liquid hydrocarbon(s).
 DERWENT CLASS: A17 E11 E12
 INVENTOR(S): SHIH, K
 PATENT ASSIGNEE(S): (SHIH-I) SHIH K; (GRAC) GRACE & CO-CONN W R
 COUNTRY COUNT: 100
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002088201	A1	20021107	(200322)*	EN	215
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW					
US 2003224927	A1	20031204	(200380)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002088201	A1	WO 2002-US11528	20020429
US 2003224927	A1	US 2001-287602P	20010430
	Provisional	US 2001-287607P	20010430
		US 2002-120331	20020410

PRIORITY APPLN. INFO: US 2001-287607P 20010430; US 2001-287602P
 20010430; US 2002-120331 20020410

AB WO 200288201 A UPAB: 20031211

NOVELTY - Co-ordination catalyst system is formed by contacting support-activator agglomerate particles (AG) with pre-catalyst reactants, in presence of liquid hydrocarbon(s). The particles are formed by agglomerating inorganic oxide component with ion containing layered material(s).

DETAILED DESCRIPTION - A co-ordination catalyst system is formed by simultaneously contacting:

(I) support-activator AG formed by agglomerating:

(A) inorganic oxide component such as silica, alumina, magnesium oxide, aluminum phosphate, titania, zirconia and/or chromium trioxide; with

(B) ion containing layered material(s) that has interspaces between layers and sufficient Lewis acidity to activate transition metal of pre-catalyst (II) when (II) is in contact with the agglomerate. This layered material has cationic and anionic components and the cationic component is present within interspace of the layered material. The layered material is intimately mixed with (IA) in an amount sufficient to provide a co-ordination catalyst system having the ability to polymerize unsaturated monomer(s);

(II) pre-catalyst reactants that comprise:

(A) Material(s) formed by reacting metallocene(s) or constrained geometry transition metal reactant(s) with metallocene(s) or constrained geometry **ligand**-containing reactant. The transition metal comprises group (3, 4) elements or lanthanide metals of periodic table; and

(B) Material(s) formed by reacting non-metallocene, non-constrained geometry, **bidentate** transition metal reactant and/or **tridentate** transition metal reactant with **bidentate** and/or **tridentate ligand** containing reactant. The transition metal comprises groups (3-10) elements of the periodic table; and

(III) liquid hydrocarbon(s) such that contact with AG (I) and pre-catalyst reactants (IIA) and optionally (IIB) form an activated pre-catalyst such that ratio of micro moles of total **ligand** forming compound to grams of agglomerate is 5:1-500:1.

INDEPENDENT CLAIMS are also included for:

(1) Preparation of catalyst system; and
(2) Polymerization which involves contacting unsaturated monomer(s) under polymerization condition with the co-ordination catalyst system.

USE - For olefin polymerization.

ADVANTAGE - Co-ordination catalyst system efficiently polymerizes olefin without need for a co-catalyst. Separate preparation and isolation of transition metal complexes is avoided.

Dwg.0/0

L34 ANSWER 5 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

ACCESSION NUMBER: 2003-229228 [22] WPIX

CROSS REFERENCE: 2003-221259 [21]; 2003-229229 [22]

DOC. NO. CPI: C2003-058796

TITLE: Coordination polymerization catalyst system comprises precatalyst and support activator agglomerate particles containing inorganic oxide compound and layered material.

DERWENT CLASS: A17 E11 E12

INVENTOR(S): SHIH, K

PATENT ASSIGNEE(S): (SHIH-I) SHIH K; (GRAC) GRACE & CO-CONN W R

COUNTRY COUNT: 100

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002088200	A1	20021107	(200322)*	EN	189
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW					
US 2003225225	A1	20031204	(200380)		
US 6686306	B2	20040203	(200413)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002088200	A1	WO 2002-US11385	20020410
US 2003225225	A1 Provisional	US 2001-287602P	20010430
		US 2002-120317	20020410
US 6686306	B2 Provisional	US 2001-287602P	20010430
		US 2002-120317	20020410

PRIORITY APPLN. INFO: US 2001-287602P 20010430; US 2002-120317
20020410

AB WO 200288200 A UPAB: 20040223

NOVELTY - A coordination catalyst system contains a precatalyst in contact with catalyst support activator agglomerate particles so that ratio of micro moles of precatalyst to grams of support activator is 5:1-500:1. The catalyst support activator contains a composite of inorganic oxide component and layered material.

DETAILED DESCRIPTION - A coordination catalyst system contains a precatalyst in intimate contact with catalyst support activator agglomerate particles so that the ratio of micro moles of precatalyst to grams of support activator is 5:1-500:1. The precatalyst comprises at least one each of:

(A) metallocene or constrained geometry transition metal compound(s) chosen from group III; IV or lanthanide metals; and

(B) non-metallocene, non-constrained geometry, **bidentate** or **tridentate** transition metal compound(s) chosen from group III-X.

The transition metal compounds in group (A) and group (B) are capable of being activated upon contact with support activator or converted (upon contact with an organometallic compound) to an intermediate which is activated upon contact with support activator. The catalyst support activator agglomerate particles contain a composite of inorganic oxide component(s) chosen from silica, alumina, magnesium oxide, aluminum phosphate, titania, zirconia, chromium trioxide and ion containing layered material(s) having interspaces between the layers and Lewis acidity. The layered material contains a cationic component and an anionic component, where the cationic component is present within the interspaces of layered material. The layered material is intimately dispersed with the inorganic oxide component to provide a coordination catalyst system having polymerization ability for unsaturated monomer(s).

INDEPENDENT CLAIMS are included for the following:

(1) Preparation of catalyst system capable of polymerizing

unsaturated monomer(s) which involves agglomerating to form particles of support activator, providing precatalyst and contacting each of precatalyst component separately or together with support activator in the presence of inert liquid hydrocarbon(s) to perform adsorption and/or absorption of precatalyst by support carrier; and

(2) Polymerization which involves contacting unsaturated monomer(s) with above coordination catalyst system.

USE - For addition polymerization of ethylenically and acetylenically unsaturated monomers.

ADVANTAGE - The coordination catalyst system effectively performs polymerization of unsaturated monomers to form polymers having broad molecular weight distribution, high bulk density and good polymer morphology. The catalyst system effectively activates (i.e. ionizes) precatalysts, eliminates use of additional expensive ionizing agents such as borane/borate and methylalumoxane activators and reduces polymerization cost. The catalyst system uses support activator which is inexpensive, eco-friendly and easy to manufacture.

DESCRIPTION OF DRAWING(S) - The figure shows molecular weight distribution results conducted on polymer (A) produced in the example. Dwg.1/1

L34 ANSWER 6 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
 ACCESSION NUMBER: 2003-167490 [16] WPIX
 DOC. NO. CPI: C2003-043610
 TITLE: Coordinating catalyst system for use in polymerizing
 olefins comprises pre-catalyst, comprising
bidentate and/or tridentate
ligand containing transition metal compound, and
 chromium immobilized support-agglomerate.
 DERWENT CLASS: A17 E11 E12
 INVENTOR(S): DENTON, D A; GLEMZA, R; SHIH, K
 PATENT ASSIGNEE(S): (DENT-I) DENTON D A; (GLEM-I) GLEMZA R; (SHIH-I) SHIH K;
 (GRAC) GRACE & CO-CONN W R
 COUNTRY COUNT: 100
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002102859	A2	20021227	(200316)*	EN	104
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ					
NL OA PT SD SE SL SZ TR TZ UG ZM ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK					
DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR					
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT					
RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW					
US 2003130111	A1	20030710	(200347)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002102859	A2	WO 2002-US11368	20020410
US 2003130111	A1 Provisional	US 2001-287600P	20010430
		US 2002-120314	20020410

PRIORITY APPLN. INFO: US 2001-287600P 20010430; US 2002-120314

20020410

AB WO2002102859 A UPAB: 20030307

NOVELTY - A coordinating catalyst system comprises pre-catalyst and chromium immobilized support-agglomerate. The pre-catalyst comprises **bidentate** and/or **tridentate ligand** containing transition metal compound. The support-agglomerate comprises inorganic oxide component(s) and ion containing layered material(s) where chromium atoms are immobilized.

DETAILED DESCRIPTION - A coordinating catalyst system comprises pre-catalyst and chromium immobilized support-agglomerate in ratio of 5:1 to 400:1. The pre-catalyst comprises non-metallocene, non-constrained geometry compound, which can be **bidentate ligand** containing transition metal compound and/or **tridentate ligand** containing transition metal compound. The transition metal is Group 3-10 of the Periodic table. The support-agglomerate comprises:

(A) composite of inorganic oxide component(s), and

(B) ion containing layered material(s). Chromium atoms are immobilized to component (A) and/or (B).

An INDEPENDENT CLAIM is included for a process of preparing an olefin polymerization catalyst system comprising contacting, in a liquid media, a chromium compound having a solubility in the media with a support-agglomerate precursor comprising inorganic oxide (A) and/or ion-containing layered clay (B) in ratio of 0.25:1 to 99:1, and agglomerating the mixture. The agglomerated product is subjected to oxidation conditions to cause the chromium atoms to have a higher valence state causing the chromium atoms to be immobilized to component (A) and/or (B). The chromium immobilized support-agglomerate is contacted, in liquid hydrocarbon, with pre-catalyst.

USE - For polymerizing olefins (claimed).

ADVANTAGE - The system does not require a conventional cocatalyst compound to provide an active catalyst composition. The absence of such cocatalysts eliminates the need to handle flammable or hazardous compounds.

Dwg. 0/0

L34 ANSWER 7 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

ACCESSION NUMBER: 2003-093605 [08] WPIX

DOC. NO. NON-CPI: N2003-074088

DOC. NO. CPI: C2003-023738

TITLE: Formation of pattern of metal containing material used in fabrication of microelectronic devices, involves applying metal complex mesomorphous film on substrate and exposing film to electromagnetic radiation.

DERWENT CLASS: E12 L03 P42 U11 U14

INVENTOR(S): BRAVO VASQUEZ, J P; HILL, R H; VASQUEZ, J P B

PATENT ASSIGNEE(S): (VASQ-I) BRAVO VASQUEZ J P; (HILL-I) HILL R H; (UYFR-N) UNIV SIMON FRASER

COUNTRY COUNT: 100

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
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WO 2002099161	A2	20021212	(200308)*	EN	51
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RW:	AT	BE	CH	CY	DE	DK	EA	ES	FI	FR	GB	GH	GM	GR	IE	IT	KE	LS	LU	MC	MW	MZ
	NL	OA	PT	SD	SE	SL	SZ	TR	TZ	UG	ZM	ZW										

W:	AE	AG	AL	AM	AT	AU	AZ	BA	BB	BG	BR	BY	BZ	CA	CH	CN	CO	CR	CU	CZ	DE	DK
	DM	DZ	EC	EE	ES	FI	GB	GD	GE	GH	GM	HR	HU	ID	IL	IN	IS	JP	KE	KG	KP	KR

KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT
 RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW
 US 2002197415 A1 20021226 (200308)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002099161	A2	WO 2002-CA832	20020606
US 2002197415	A1 CIP of	US 2001-875957	20010606
		US 2001-876944	20010608

PRIORITY APPLN. INFO: US 2001-876944 20010608; US 2001-875957
 20010606

AB WO 200299161 A UPAB: 20030204

NOVELTY - Mesomorphous film of metal complex is applied to substrate surface. Selected area of film is exposed to electromagnetic radiation to make metal complex undergo photo-chemical reaction to form metal containing material adherent to substrate and **ligand** byproduct(s) which is removed during reaction and a pattern is formed. Unreacted metal complex and remainder of byproduct(s) are optionally removed.

DETAILED DESCRIPTION - A mesomorphous film of a metal complex is applied to a surface of substrate. A selected area of the film having shape (I) is exposed to electromagnetic radiation from a source (I) in predetermined atmosphere to make metal complex in the selected area of the film to undergo a photo-chemical reaction which transforms the metal complex into a metal containing material adherent (I) to the substrate and **ligand** byproduct(s). The portion of the byproduct(s) obtained is removed during the photo-chemical reaction and a pattern having shape (I) is obtained. Unreacted metal complex and remaining amount of byproduct(s) are optionally removed. An INDEPENDENT CLAIM is included for a thin mesomorphous film provided on a substrate which contains a photo-reactive precursor metal complex.

USE - For forming pattern of metal containing material on substrate which is used in manufacture of very large scale integration devices and pattern formed is used in fabrication of microelectronic devices and used in interconnection of components on semi-custom chips and in patterning of integrated circuits and used as electrodes for capacitors, conductors and resistors.

ADVANTAGE - The method of forming pattern on substrate does not require applying and removing of photo-resist to the substrate being fabricated. Since the mesomorphous film of metal complex has desirable disorder and capacity for molecular motion, photo-chemical reaction of the metal complex is performed efficiently and high definition optical lithographic pattern is obtained economically. The mesomorphous film does not provide detrimental effects to the pattern. An uniform planar thin mesomorphous film is formed on the substrate without requiring a Planarization step.

DESCRIPTION OF DRAWING(S) - The figure shows a block diagram of the formation of pattern of metal contains material on a substrate.
 Dwg.1/6

L34 ANSWER 8 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
 ACCESSION NUMBER: 2002-750142 [81] WPIX
 DOC. NO. CPI: C2002-212520

TITLE: Bridge complex compound, useful as lubricant for steel processing, comprises central metal atoms, **multidentate ligand** forming bridge between central metal atoms, and another **multidentate ligand** having coordinating atom.

DERWENT CLASS: E11 E12 H07 M21

INVENTOR(S): KAWAHARA, F; OJIMA, H; TOMONO, M

PATENT ASSIGNEE(S): (MECI-N) MEC INT KK; (OJIM-I) OJIMA H; (MECI-N) MEC INT CORP

COUNTRY COUNT: 2

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 2002123435	A1	20020905	(200281)*		20
JP 2002188090	A	20020705	(200281)		16

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2002123435	A1	US 2001-990857	20011115
JP 2002188090	A	JP 2000-389433	20001221

PRIORITY APPLN. INFO: JP 2000-389433 20001221

AB US2002123435 A UPAB: 20021216

NOVELTY - A compound having bridge complex comprises at least two central metal atoms, at least one **multidentate ligand** (L2) forming bridge between two central metal atoms, and at least one **multidentate ligand** (L3) having coordinating atom(s). The coordinating atom of the **ligand** (L3) is coordinated with a metal atom, and is not coordinated or only partially coordinated with the central metal atoms.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) Lubricating liquid including the bridge complex compound as main component, dispersed or suspended in aqueous solution.

(2) Formation of lubricating film on metal surface which involves contacting the lubricating liquid with the metal surface.

USE - Lubricant for plastic processing of steel.

ADVANTAGE - The bridge complex compound is manufactured easily. The lubricating layer is formed easily, without requiring complex and costly pre-treatment and post-treatment processing. The lubricating layer firmly adheres to the metal surface. Environmental pollution during the coating of lubricant is eliminated.

DESCRIPTION OF DRAWING(S) - The figure is the graph showing the maximum backward piercing depth in piercing test.
Dwg.2/4

L34 ANSWER 9 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

ACCESSION NUMBER: 2002-749402 [81] WPIX

DOC. NO. CPI: C2002-212403

TITLE: New rectangular organometallic compounds, useful in e.g. molecular recognition and separation applications, comprise transition metal and carbonyl and bipyridyl

ligands..
 DERWENT CLASS: E12 J01
 INVENTOR(S): LEE, F; LEE, G; LU, K; MANIMARAN, B; PENG, S; RAJANDRAN, T; WANG, C
 PATENT ASSIGNEE(S): (SINI-N) ACAD SINICA
 COUNTRY COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 6455693	B1	20020924	(200281)*		11

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 6455693	B1	US 2000-718031	20001120

PRIORITY APPLN. INFO: US 2000-718031 20001120

AB US 6455693 B UPAB: 20021216

NOVELTY - Rectangular organometallic compounds (I) comprising transition metal and carbonyl and bipyridyl **ligands** are new.

DETAILED DESCRIPTION - Rectangular organometallic compounds of formula (I) are new.

M = Fe, Ru, Os, **Re**, **Mn**, Cr, Mo or W;

A, B = a group of formulae (i)-(xi);

n = 1-4;

m = 0, 1 or 2; and

X = Cl, Br or I.

The groups A and B are non-identical.

INDEPENDENT CLAIMS are also included for:

- (1) A method of preparing (I).
- (2) A method of forming a thin film on an electrode comprising:
 - (a) preparing a solution of (I),
 - (b) dip coating or spraying the electrode with the solution and
 - (c) drying.

USE - (I) is used in e.g. molecular recognition and separation applications, ultrafiltration and optical rectification. It can be coated or provided as thin film on substrates e.g. electrodes, including gold, glassy carbon, and indium **tin** oxide (ITO) conductive glass electrodes. It can also be used as sensor in host-guest chemistry and in molecular recognition.

ADVANTAGE - (I) is neutral, exhibits luminescence in solution at room temperature, and can be prepared using mild temperature conditions.

Dwg.0/3

L34 ANSWER 10 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
 ACCESSION NUMBER: 2002-723232 [78] WPIX
 DOC. NO. CPI: C2002-204721
 TITLE: Novel peptide-chelate conjugates, for diagnostic imaging of colorectal cancer in mammals, comprises a peptide having affinity for the heat-stable toxin receptor 'ST', conjugated to tetradentate chelating agent.
 DERWENT CLASS: B04 D16 K08
 INVENTOR(S): BACON, E R; CUTHBERTSON, A; DESAI, V C; DIXON, M; KASINA, S; MENDIZABAL, M; STOREY, A E; WOLFE, H R

PATENT ASSIGNEE(S): (AMSH) AMERSHAM PLC
 COUNTRY COUNT: 101
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002070018	A2	20020912	(200278)*	EN	50
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW					
EP 1368064	A2	20031210	(200382)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002070018	A2	WO 2002-GB857	20020301
EP 1368064	A2	EP 2002-701431	20020301
		WO 2002-GB857	20020301

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 1368064	A2 Based on	WO 2002070018

PRIORITY APPLN. INFO: GB 2001-5224 20010302

AB WO 200270018 A UPAB: 20021204

NOVELTY - A peptide-chelate conjugate (I) comprising a peptide of 10-25 amino acids having affinity for the ST receptor, conjugated to a tetradentate chelating agent, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) a metal complex (II) which comprises a radiometal complexed to the tetradentate chelating agent of (I);

(2) a radiopharmaceutical composition (III) in a form suitable for human administration, comprising (II); and

(3) a kit for the preparation of (III), comprising (I) and a reducing agent.

USE - Useful for imaging cancer of colorectal origin (claimed) in mammals.
 Dwg.0/10

L34 ANSWER 11 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

ACCESSION NUMBER: 2002-636469 [68] WPIX

DOC. NO. CPI: C2004-013512

TITLE: **Multidentate** sulfur-containing ligand for chelating heavy metals contained in industrial waste water, acid mine drainage and soil, is new.

DERWENT CLASS: D15 E19 P43

INVENTOR(S): ATWOOD, D A; HOWERTON, B S; MATLOCK, M

PATENT ASSIGNEE(S): (KENT) UNIV KENTUCKY RES FOUND; (ATWO-I) ATWOOD D A;

(HOWE-I) HOWERTON B S; (MATL-I) MATLOCK M
 COUNTRY COUNT: 100
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002049967	A2	20020627	(200268)*	EN	50
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ					
NL OA PT SD SE SL SZ TR TZ UG ZM ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK					
DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR					
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT					
RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW					
US 2002100732	A1	20020801	(200268)		
AU 2002045070	A	20020701	(200269)		
US 6586600	B2	20030701	(200345)		
EP 1355883	A2	20031029	(200379)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT					
RO SE SI TR					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002049967	A2	WO 2001-US46441	20011206
US 2002100732	A1	US 2000-730622	20001206
AU 2002045070	A	AU 2002-45070	20011206
US 6586600	B2	US 2000-730622	20001206
EP 1355883	A2	EP 2001-993216	20011206
		WO 2001-US46441	20011206

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2002045070	A Based on	WO 2002049967
EP 1355883	A2 Based on	WO 2002049967

PRIORITY APPLN. INFO: US 2000-730622 20001206

AB WO 200249967 A UPAB: 20040115

NOVELTY - A **multidentate** sulfur-containing **ligand** of specific formula, is new.

DETAILED DESCRIPTION - The **multidentate** sulfur-containing **ligand** of formula (I or II) is new.

n = 1-4;

X = hydrogen, lithium, sodium, potassium, rubidium, caesium or francium.

INDEPENDENT CLAIMS are included for the following:

(1) Method for removing metal from a starting material using the **multidentate** sulfur-containing **ligand**;

(2) Method of removing metal from water using the **multidentate** sulfur-containing **ligand**;

(3) Method of acid mine drainage treatment using the **multidentate** sulfur-containing **ligand**; and

(4) Treatment of soil containing metal using the **multidentate** sulfur-containing **ligand**.

USE - Used for binding and removal of heavy metals from industrial

waste water, acid mine drainage and soil.

ADVANTAGE - The sulfur-containing chelating **ligand** bind heavy metal ions in such a manner to form stable, irreversible and insoluble **ligand**-metal precipitates, stable over a range of environmental conditions and over extended period of time. The treated soil may be left in situ or removed for disposal without requiring leaching of the metal into the environment.

DESCRIPTION OF DRAWING(S) - The figure shows binding and removal of lead from solution by 1,3 benzene-thiol **ligand** at pH of 4.0 using 1:1 molar ratio of **ligand**:metal.

Dwg.1a/3

L34 ANSWER 12 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
 ACCESSION NUMBER: 2002-507918 [54] WPIX
 DOC. NO. NON-CPI: N2002-401966
 DOC. NO. CPI: C2002-144379
 TITLE: Kit for preparing radiopharmaceutical comprises **lyophilized** composition containing complexing **ligand** and oxidant e.g. benzoquinone, coenzyme Q0.
 DERWENT CLASS: B05 D16 K08 P31
 INVENTOR(S): CAGNOLINI, A; LINDER, K E; MARINELLI, E R
 PATENT ASSIGNEE(S): (BRAC) BRACCO RES USA
 COUNTRY COUNT: 96
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002032294	A2	20020425	(200254)*	EN	43
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
AU 2002031328	A	20020429	(200255)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002032294	A2	WO 2001-US50802	20011019
AU 2002031328	A	AU 2002-31328	20011019

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2002031328	A Based on	WO 2002032294

PRIORITY APPLN. INFO: US 2000-241782P 20001019

AB WO 200232294 A UPAB: 20020823

NOVELTY - A kit comprises a **lyophilized** composition containing a complexing **ligand** and an oxidant.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

- (1) Composition comprising a radiopharmaceutical and an oxidant; and

- (2) Preparation of a radiopharmaceutical composition involves:
 (i) contacting a complexing **ligand** with a radionuclide to form a complex; and
 (ii) contacting the complexing **ligand** with an oxidant.

USE - For the preparation of radiopharmaceuticals (claimed).

ADVANTAGE - The obtained radiopharmaceutical has a radiochemical purity of greater than 90 (preferably 92, especially 95)% at about six hours after reconstitution. The composition has a radiochemical purity of 92 (preferably 94, especially 96)% at about six hours after reconstitution or approx. 6 hours after the complex is formed. The kit inhibits the degradation of diagnostic or radiotherapeutic radiopharmaceuticals, especially radiolabeled compounds containing reducible moieties.

Dwg.0/3

L34 ANSWER 13 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
 ACCESSION NUMBER: 2002-195915 [25] WPIX
 DOC. NO. CPI: C2002-060604
 TITLE: Radiopharmaceutical for diagnostic imaging of e.g. heart comprises a **technetium**-99m nitride (**TC**-99m(N)) heterocomplex containing **TC**-99m(N) coordinated with two different **ligands**.
 DERWENT CLASS: B04 B05 K08
 INVENTOR(S): BOLZATI, C; BOSCHI, A; DUATTI, A; REFOSCO, F; TISATO, F; UCCELLI, L
 PATENT ASSIGNEE(S): (NIMD) NIPPON MEDIPHYSICS CO LTD; (BOLZ-I) BOLZATI C; (BOSC-I) BOSCHI A; (DUAT-I) DUATTI A; (REFO-I) REFOSCO F; (TISA-I) TISATO F; (UCCE-I) UCCELLI L
 COUNTRY COUNT: 27
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002009771	A1	20020207	(200225)*	EN	61
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR					
W: AU CA JP KR NO NZ US					
AU 2001076677	A	20020213	(200238)		
NO 2003000342	A	20030321	(200328)		
EP 1307239	A1	20030507	(200332)	EN	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR					
KR 2003024809	A	20030326	(200346)		
US 2004018147	A1	20040129	(200413)		
JP 2004505064	W	20040219	(200414)		101

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002009771	A1	WO 2001-JP6402	20010725
AU 2001076677	A	AU 2001-76677	20010725
NO 2003000342	A	WO 2001-JP6402	20010725
		NO 2003-342	20030123
EP 1307239	A1	EP 2001-954337	20010725
		WO 2001-JP6402	20010725
KR 2003024809	A	KR 2003-701096	20030124
US 2004018147	A1	WO 2001-JP6402	20010725
		US 2003-332707	20030904
JP 2004505064	W	WO 2001-JP6402	20010725

JP 2002-515323 20010725

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001076677	A Based on	WO 2002009771
EP 1307239	A1 Based on	WO 2002009771
JP 2004505064	W Based on	WO 2002009771

PRIORITY APPLN. INFO: JP 2000-228898 20000728

AB WO 200209771 A UPAB: 20020418

NOVELTY - A radiopharmaceutical comprises a **technetium-99m** nitride (**TC-99m(N)**) heterocomplex containing **TC-99m(N)** coordinated with two different **ligands** such that a bisphosphinoamine compound is a pi electron acceptor and a **bidentate ligand** is a pi electron donor.

DETAILED DESCRIPTION - A radiopharmaceutical of formula (**TC-99m(N)** (PNP) (XY)) + comprises a **technetium-99m** nitride (**TC-99m(N)**) heterocomplex containing **TC-99m(N)** coordinated with two different **ligands** such that a bisphosphinoamine compound is a pi electron acceptor and a **bidentate ligand** is a pi electron donor.

PNP = bisphosphinoamine compound;

XY = a **bidentate ligand**.

An INDEPENDENT CLAIM is included for a kit for preparing the radiopharmaceutical for diagnostic imaging involving a container containing a composition comprising a nitride nitrogen donor and a reducing agent and a container containing bisphosphinoamine and **bidentate ligand**.

USE - For radiodiagnostic imaging of heart, adrenal glands (claimed).

ADVANTAGE - The radiopharmaceutical had no acute toxicity. The heterocomplex is markedly accumulates in specific organs in particular heart and adrenal glands with high heart/lung and heart/liver ratios and hence is useful for radiodiagnostic imaging.

Dwg.0/0

L34 ANSWER 14 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

ACCESSION NUMBER: 2002-114263 [15] WPIX

DOC. NO. CPI: C2002-035018

TITLE: Preparation of facial metal tricarbonyl compounds of group VII-B metal useful in diagnostic or therapeutic agents involves use of **stannous** ion as the **permetallate** reductant.

DERWENT CLASS: B06 K08

INVENTOR(S): DYSZLEWSKI, M E; PIPES, D W; WEBB, E G

PATENT ASSIGNEE(S): (MLCW) MALLINCKRODT INC

COUNTRY COUNT: 22

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001089586	A2	20011129	(200215)*	EN	20
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR					
W: JP US					
US 6359119	B1	20020319	(200224)		
US 2002147316	A1	20021010	(200269)		

EP 1283729 A2 20030219 (200321) EN
 R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR
 JP 2003535005 W 20031125 (200380) 26

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001089586	A2	WO 2001-US15670	20010508
US 6359119	B1	US 2000-576960	20000524
US 2002147316	A1 Div ex	US 2000-576960	20000524
		US 2002-53612	20020124
EP 1283729	A2	EP 2001-944139	20010508
		WO 2001-US15670	20010508
JP 2003535005	W	JP 2001-585827	20010508
		WO 2001-US15670	20010508

FILING DETAILS:

PATENT NO	KIND	PATENT NO
US 2002147316	A1 Div ex	US 6359119
EP 1283729	A2 Based on	WO 2001089586
JP 2003535005	W Based on	WO 2001089586

PRIORITY APPLN. INFO: US 2000-576960 20000524; US 2002-53612
 20020124

AB WO 200189586 A UPAB: 20020306

NOVELTY - Preparation of **technetium, manganese** and **rhodium** carbonyl complexes involves reacting a metal in **permetallate** form with carbon monoxide and a reducing agent, preferably **stannous** ion.

DETAILED DESCRIPTION - Preparation of a compound of formula (I) involves reacting a metal in **permetallate** form with carbon monoxide and a reducing agent, preferably **stannous** ion.

M = Mn, ^{99m}Tc, ¹⁸⁶Re or ¹⁸⁸Re;

fac = not defined.

INDEPENDENT CLAIMS are also included for the following:

(A) preparing a compound of formula fac-(M(CO)₃L_x)_n (II) involving reacting (I) with **ligand** L_x;

(B) a kit (1) for preparing (I) comprising a **lyophilized** formulation including **stannous** ion, which optionally in the form of a discrete molecule of **stannous** ion plus an anion. The mixture is sealed in a container having a headspace comprising carbon monoxide; and

(C) a kit (2) for preparing (II) comprising the **lyophilized** formulation and the metal (M).

L_x = three monodentate **ligands**, one monodentate **ligand** and one **bidentate ligand** or one **tridentate ligand**; and

n = charge of L_x increased with one + charge.

USE - For the synthesis of diagnostic and therapeutic agents, preferably for the synthesis of diagnostic and therapeutic agents derived radioactive metals with a short lifetime.

ADVANTAGE - The method involves the use of easily available and low-toxic starting materials at moderate temperature and at normal pressure of CO, in a reasonable time and with high yield. The use of the

more common Sn+2 in radiopharmaceutical kits has certain advantages such as a wide pH range of use, known toxicity, familiarity with the Food and Drug Administration (FDA) and perhaps better adaptability between **Tc** and **Re** formulations. In addition, **stannous** ion is less likely to interfere with the biological substrate or **ligands** which are ultimately labeled. The method of using Sn+2 for the preparation of **Tc**-carbonyl complexes results in greater than 80% of yield. The **stannous** ions are nucleophilic and that are generally considered as less reactive than the electrophilic reducing agent BH3 known in the prior art.

Dwg.0/0

L34 ANSWER 15 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
 ACCESSION NUMBER: 2001-549658 [61] WPIX
 DOC. NO. NON-CPI: N2001-408313
 DOC. NO. CPI: C2001-163526
 TITLE: Silver halide photographic material comprises metal complex having organic compounds as **ligands** and/or complex having diketone compound as **ligand**
 DERWENT CLASS: E19 G06 P83
 INVENTOR(S): INABA, T; MATSUNO, T; SATO, T
 PATENT ASSIGNEE(S): (FUJF) FUJI PHOTO FILM CO LTD; (INAB-I) INABA T; (MATS-I) MATSUNO T; (SATO-I) SATO T
 COUNTRY COUNT: 2
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 2001021492	A1	20010913	(200161)*		23
JP 2001235824	A	20010831	(200165)		19
JP 2001264916	A	20010928	(200172)		16

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2001021492	A1	US 2001-789802	20010222
JP 2001235824	A	JP 2000-44482	20000222
JP 2001264916	A	JP 2000-70751	20000314

PRIORITY APPLN. INFO: JP 2000-70751 20000314; JP 2000-44482 20000222

AB US2001021492 A UPAB: 20011024
 NOVELTY - A silver halide photographic material comprises a support having silver halide emulsion layer(s). The material comprises a metal complex having at least one bridged dipyrityl and/or diketone **ligand**.
 DETAILED DESCRIPTION - A silver halide photographic material comprises a support having silver halide emulsion layer(s). The material contains a complex having a compound of formula (I) as a **ligand** and/or a complex having a diketone compound as a **ligand**.
 X = a bridging group;
 R1-R4, R'1-R'4 = H or a substituent.
 USE - For use as silver halide photographic material.
 ADVANTAGE - The cyanide ion-free silver halide photographic material of the invention has higher sensitivity and low intrinsic desensitization.

Dwg.0/0

L34 ANSWER 16 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
 ACCESSION NUMBER: 2001-396350 [42] WPIX
 CROSS REFERENCE: 1990-262735 [35]; 1993-151788 [18]; 1995-214083 [28];
 1998-311411 [27]
 DOC. NO. CPI: C2001-120528
 TITLE: Metal-labeled macromolecule useful as imaging agent or
 radio-chemical is formed by contacting **technetium**
 , **rhenium** or molybdenum with protein,
 glycoprotein or peptide conjugate having free
 hydrazine/hydrazide groups.
 DERWENT CLASS: B04 K08
 INVENTOR(S): ABRAMS, M J; GIANDOMENICO, C M; SCHWARTZ, D A; ZUBIETA, J
 A
 PATENT ASSIGNEE(S): (ANOR-N) ANORMED INC
 COUNTRY COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 6217845	B1	20010417	(200142)*		16

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 6217845	B1 CIP of	US 1989-315270	19890224
	Cont of	US 1990-483201	19900221
	Cont of	US 1992-888282	19920526
	Div ex	US 1993-26426	19930304
	Div ex	US 1995-384641	19950206
		US 1997-965188	19971106

FILING DETAILS:

PATENT NO	KIND	PATENT NO
US 6217845	B1 Cont of	US 5206370
	Div ex	US 5420285

PRIORITY APPLN. INFO: US 1990-483201 19900221; US 1989-315270
 19890224; US 1992-888282 19920526; US
 1993-26426 19930304; US 1995-384641
 19950206; US 1997-965188 19971106

AB US 6217845 B UPAB: 20010726

NOVELTY - A metal-labeled macromolecule is formed by contacting a reduced metal species selected from **technetium (Tc)**, **rhenium (Re)** or molybdenum (Mo) with a protein, glycoprotein or peptide conjugate having free hydrazine/hydrazide groups capable of binding with the metal species.

DETAILED DESCRIPTION - A metal-labeled macromolecule is formed by contacting a reduced metal species selected from **technetium**, **rhenium** or molybdenum with a protein, glycoprotein or peptide conjugate having free hydrazine/hydrazide groups capable of binding with the metal species. The conjugate is formed by reaction of a protein, glycoprotein or peptide having a reactive free primary amino group with a

compound of formula (I) or (II).

A and B = carbon or nitrogen;

D = direct bond, CH₂, C=O or NH-C(S)- and is attached to the 4-position of the ring;

E = C=O;

F = a group readily replaced by a primary amine in neutral or basic aqueous media;

E+F = a maleimidyl group;

R, R' and R = H or lower alkyl; and

X = a negative counterion.

USE - As an imaging agent or a radiochemical (claimed) useful in biology and medicine for imaging and/or therapy.

ADVANTAGE - The binding of the metal at sites other than the chelating group is minimal, and in which the labeling occurs at a relatively fast rate (less than one hour at room temperature).

Dwg.0/8

L34 ANSWER 17 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
 ACCESSION NUMBER: 2001-307059 [32] WPIX
 CROSS REFERENCE: 1993-177186 [22]; 1998-050945 [05]; 1998-520229 [44];
 2002-461676 [49]
 DOC. NO. CPI: C2001-094733
 TITLE: Metal **ligand** complexes containing hypoxia
 localizing moieties for imaging, therapy and
 radiosensitization.
 DERWENT CLASS: B03 K08
 INVENTOR(S): DIROCCO, R J; LINDER, K; NOWOTNIK, D P; NUNN, A D; PIRRO,
 J P; RAMALINGAM, K; RUMSEY, W L
 PATENT ASSIGNEE(S): (BRAC) BRACCO INT BV
 COUNTRY COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 6184361	B1	20010206	(200132)*		35

APPLICATION DETAILS:

PATENT NO.	KIND	APPLICATION	DATE
US 6184361	B1 CIP of	US 1991-784486	19911029
	CIP of	US 1992-976079	19921113
	Cont of	US 1993-54120	19930427
	Div ex	US 1995-415743	19950403
		US 1995-473562	19950606

FILING DETAILS:

PATENT NO	KIND	PATENT NO
US 6184361	B1 Div ex	US 5808091

PRIORITY APPLN. INFO: US 1993-54120 19930427; US 1991-784486
 19911029; US 1992-976079 19921113; US
 1995-415743 19950403; US 1995-473562 19950606

AB US 6184361 B UPAB: 20020802
 NOVELTY - New complexes comprising a metal and a **ligand**

containing hypoxia localizing moieties for imaging, therapy and radiosensitization.

DETAILED DESCRIPTION - Complexes comprising a metal and a **ligand** of formula (I) are new:

Ra = absent; and

Rb = NOH; or

Ra = R'; and

Rb = SR1; or

Rb+Rb = S-S;

At least one R' = (A)pR2; and the other

R' groups = a group R;

R = H, halo, OH, alkyl, alkenyl, alkynyl, alkoxy, aryl, COOR3, C(O)NHR3, NH2, hydroxyalkyl, alkoxyalkyl, hydroxyaryl, haloalkyl, aralkyl, alkyl-COOR3, alkylCON(R3)2, alkylN(R3)2, arylCOOR3, arylCON(R3)2, arylN(R3)2 or 5-6 membered nitrogen or oxygen containing heterocycle; or

CRR or CRCR = a carbocyclic or heterocyclic, optionally unsaturated spiro or fused ring (optionally substituted by R);

(A)p = a linking group;

R1 = H, a thiol protecting group or (A)pR2;

R2 = a nitro-heterocyclic hypoxia localizing moiety;

R3 = H, alkyl or aryl;

m = 2-5; and

p = 0-20.

An INDEPENDENT CLAIM is included for a kit suitable for preparation of the above complex comprising a source of the **ligand** and a reducing agent.

ACTIVITY - Cytostatic.

MECHANISM OF ACTION - None given.

USE - For imaging, therapy and radiosensitization.

ADVANTAGE - Radiolabelled complexes of hypoxia-localizing moieties which retain the biochemical behavior and affinity of such moieties, can be labeled at room temperature with an easy-to-use radionuclide and are capable of providing increased amount of the radionuclide to the target area.

Dwg.0/0

L34 ANSWER 18 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
 ACCESSION NUMBER: 1998-312395 [27] WPIX
 DOC. NO. CPI: C1998-096404
 TITLE: Water-based lubricant useful in plastic reprocessing by casting, extrusion etc. - is prepared as suspension of sulphur-coordinated metal chelate, water, surfactant etc..
 DERWENT CLASS: A97 E12 H08 M21
 INVENTOR(S): IKESUE, F; KASHIMURA, N; KAWAHARA, F; OJIMA, H; TAKEUCHI, M; TOMONO, M; IKESUE, H; KAWAHARA, H; IKESUE, F; OZIMA, H
 PATENT ASSIGNEE(S): (MECI-N) MEC INT CORP; (OJIM-I) OJIMA H; (TOYT) TOYOTA JIDOSHA KK; (MECI-N) MEC INT KK; (OZIM-I) OZIMA H; (IKES-I) IKESUE F; (KASH-I) KASHIMURA N; (KAWA-I) KAWAHARA F; (TAKE-I) TAKEUCHI M; (TOMO-I) TOMONO M
 COUNTRY COUNT: 21
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9822472	A1	19980528	(199827)*	JA	31
RW: AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE					

W: JP US
 EP 947519 A1 19991006 (199946) EN
 R: DE FR GB
 JP 10523466 X 19991221 (200010)
 KR 99085275 A 19991206 (200056) #
 JP 3217072 B2 20011009 (200164) 13
 JP 2001323294 A 20011122 (200202) 12
 KR 268118 B 20010302 (200214) #
 US 2002111278 A1 20020815 (200256)
 EP 947519 B1 20030604 (200344) EN
 R: DE FR GB
 DE 69722658 E 20030710 (200353)
 TW 521086 A 20030221 (200368) #

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9822472	A1	WO 1997-JP4197	19971118
EP 947519	A1	EP 1997-912498	19971118
		WO 1997-JP4197	19971118
JP 10523466	X	WO 1997-JP4197	19971118
		JP 1998-523466	19971118
KR 99085275	A	KR 1998-17593	19980515
JP 3217072	B2	WO 1997-JP4197	19971118
		JP 1998-523466	19971118
JP 2001323294	A Div ex	JP 1998-523466	19971118
		JP 2001-149839	19971118
KR 268118	B	KR 1998-17593	19980515
US 2002111278	A1 Cont of	WO 1997-JP4197	19971118
	Cont of	US 1999-308383	19990701
		US 2001-988401	20011119
EP 947519	B1	EP 1997-912498	19971118
		WO 1997-JP4197	19971118
DE 69722658	E	DE 1997-622658	19971118
		EP 1997-912498	19971118
		WO 1997-JP4197	19971118
TW 521086	A	TW 1998-107249	19980511

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 947519	A1 Based on	WO 9822472
JP 10523466	X Based on	WO 9822472
JP 3217072	B2 Based on	WO 9822472
KR 268118	B Previous Publ.	KR 99085275
EP 947519	B1 Based on	WO 9822472
DE 69722658	E Based on	EP 947519
	Based on	WO 9822472

PRIORITY APPLN. INFO: JP 1996-306910 19961118; KR 1998-17593
 19980515; TW 1998-107249 19980511

AB WO 9822472 A UPAB: 19980709

A water-based lubricant is obtained by suspending or dispersing a metal chelate compound in water, the metal chelate of which is composed of 1 or more metal atoms selected from zinc, **manganese**, iron,

molybdenum, **tin** and antimony and a **multidentate** chelate **ligand** containing at least 1 sulphur coordination atom.

USE - The lubricant is useful particularly in plastic reprocessing by casting, extrusion, drawing, rolling and pressing when a lubricating layer is needed between the metal surface and/or moulded surface.

ADVANTAGE - A tough lubricating film can be formed for heavy working of metal only by applying the lubricant on the metal surface. Since the film contains sulphur as the coordination atom, it can provide free sulphur radicals through decomposition by the triboreaction under extreme-pressure conditions to react with the surface metal or metal ions from decomposition of the metal chelate to give lubricating sulphide film. Furthermore, there is little deterioration in the working environment even without using oil. No extra treatments are required for degreasing and applying the lubricant. The lead time is short when employed in the plastic reprocessing.

Dwg.0/0

L34 ANSWER 19 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
 ACCESSION NUMBER: 1994-332840 [41] WPIX
 DOC. NO. CPI: C1994-151358
 TITLE: Radio-pharmaceutical formulation having non-
stannous reductants - for use in kits for forming
 imaging agents.
 DERWENT CLASS: B05 B06
 INVENTOR(S): BRODACK, J W; DEROSCH, M A; DEUTSCH, E A; DEUTSCH, K F;
 DYSZLEWSKI, M M; DYSZLEWSKI, M
 PATENT ASSIGNEE(S): (MLCW) MALLINCKRODT MEDICAL INC
 COUNTRY COUNT: 30
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9422496	A1	19941013	(199441)*	EN	13
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
W: AU BR CA CZ FI HU JP KR NO PL SK					
AU 9464938	A	19941024	(199505)		
FI 9504598	A	19950928	(199550)		
NO 9503756	A	19950922	(199550)		
EP 692978	A1	19960124	(199609)	EN	
R: AT BE CH DE DK ES FR GB GR IE IT LI NL PT SE					
JP 08508500	W	19960910	(199704)		11
US 5662882	A	19970902	(199741)		3
HU 75669	T	19970528	(199805)		
NO 313954	B1	20030106	(200311)		
HU 222574	B1	20030828	(200363)		
MX 9402323	A1	20020801	(200366)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9422496	A1	WO 1994-US3389	19940329
AU 9464938	A	AU 1994-64938	19940329
FI 9504598	A	WO 1994-US3389	19940329
		FI 1995-4598	19950928
NO 9503756	A	WO 1994-US3389	19940329
		NO 1995-3756	19950922

EP 692978	A1	EP 1994-912332	19940329
		WO 1994-US3389	19940329
JP 08508500	W	JP 1994-522283	19940329
		WO 1994-US3389	19940329
US 5662882	A Cont of	US 1993-40739	19930331
		US 1995-410642	19950323
HU 75669	T	WO 1994-US3389	19940329
		HU 1995-2859	19940329
NO 313954	B1	WO 1994-US3389	19940329
		NO 1995-3756	19950922
HU 222574	B1	WO 1994-US3389	19940329
		HU 1995-2859	19940329
MX 9402323	A1	MX 1994-2323	19940329

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9464938	A Based on	WO 9422496
EP 692978	A1 Based on	WO 9422496
JP 08508500	W Based on	WO 9422496
HU 75669	T Based on	WO 9422496
NO 313954	B1 Previous Publ.	NO 9503756
HU 222574	B1 Previous Publ.	HU 75669
	Based on	WO 9422496

PRIORITY APPLN. INFO: US 1993-40739 19930331; US 1995-410642
19950323

AB WO 9422496 A UPAB: 19950207

A kit form forming a radio-pharmaceutical imaging agent including a non-**stannous** reducing agent is new.

The reducing agent is a metallic cpd. selected from Cu(I), Cu(II), Co(II), Fe(II), Sn(0), Zr(0), Cr(II) or Zn(0); or a non-metallic cpd. selected from acids in general, dithionite, formamidine, formamidine sulphinic acid, phosphite, hypophosphite, dithiothreitol, HCl or borohydric acid; or partic. a phosphine, sulphhydryl cpd., phosphite, thio, thioether, borate, borocycano gp., ascorbate or gentisate; esp. a mono-dentate phosphine, tris(3-methoxypropyl)phosphine (TMPP), a tert.phosphine, hypophosphite ion or hydrogen phosphite. The reducing agent is opt. also a complexing agent for the imaging agent.

USE/ADVANTAGE - The kits are useful e.g, for forming a **technetium** myocardial imaging agent. Previously, **stannous** ion has been used as a reducing agent, but **stannous** cpds. have complicated solid and soln. chemistry, and the **stannous** ion may interfere with the formation of the radio-pharmaceutical agent or become incorporated into it. The new reducing agents do not have these disadvantages.

Dwg.0/0

L34 ANSWER 20 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

ACCESSION NUMBER: 1994-208722 [25] WPIX

CROSS REFERENCE: 1987-051613 [08]; 1990-075629 [10]

DOC. NO. NON-CPI: N1994-164202

DOC. NO. CPI: C1994-095518

TITLE: Kit for preparing complex of isonitrile **ligand** and radionuclide - comprises a copper adduct of the **ligand** and reducing agent..

DERWENT CLASS: B05 K08 Q34
 INVENTOR(S): CARPENTER, A B; LINDER, K E; MAHEU, L J; PATZ, M A;
 SUBRAMANYAM, V; THOMPSON, J S; TULIP, T H
 PATENT ASSIGNEE(S): (DUPO) DUPONT MERCK PHARM CO
 COUNTRY COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 5324824	A	19940628	(199425)*		5

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
US 5324824	A	CIP of	US 1985-762392	19850805
		Div ex	US 1986-880349	19860625
		Cont of	US 1989-411024	19891115
			US 1991-670458	19910312

FILING DETAILS:

PATENT NO	KIND		PATENT NO
US 5324824	A	Div ex	US 4894445

PRIORITY APPLN. INFO: US 1985-762392 19850805; US 1986-880349
 19860625; US 1989-411024 19891115; US
 1991-670458 19910312

AB US 5324824 A UPAB: 19940810

A **lyophilised** kit for preparing a coordination complex of an isonitrile **ligand** and a radionuclide selected from radioactive isotopes of **Tc**, Ru, Co, Pt, Fe, Os, Ir, W, **Re**, Cr, Mo, **Mn**, Ni, Rh, Pd, Nb, and Ta comprises a **lyophilised** predetermined quantity of (a) an adduct of a complex of copper and the isonitrile **ligand** and (b) a reducing agent capable of reducing a predetermined quantity of one of the radionuclides to form the complex by replacing the copper from the **ligand** with the radionuclide.

The radionuclide is **Tc-99m**, the isonitrile **ligand** is RNC where R is butyl opt. having an alkyl ether or alkyl ester substitution, and the reducing agent is **stannous** ion.

USE/ADVANTAGE - US4452774 describes a coordination complex of an isonitrile **ligand** with a radioactive metal (radionuclide) and methods for using such complexes e.g. as imaging and labelling agents. Many isonitrile **ligands** are extremely volatile and difficult to handle but this problem is overcome in the present kit.
 Dwg.0/0

L34 ANSWER 21 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
 ACCESSION NUMBER: 1992-182962 [22] WPIX
 CROSS REFERENCE: 1992-182961 [22]
 DOC. NO. CPI: C1992-083787
 TITLE: New **technetium** (III) myocardial imaging agents
 - with high bio-distribution and rapid blood clearance.
 DERWENT CLASS: B02 B03 K08 Q34
 INVENTOR(S): DEUTSCH, E A; DYSZLEWSKI, M; NEUMANN, W L; WOULFE, S R;
 DYSZLEWSKI, M M

PATENT ASSIGNEE(S): (MLCW) MALLINCKRODT MEDICAL INC

COUNTRY COUNT: 19

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 5112595	A	19920512	(199222)*		12
EP 563328	A1	19931006	(199340)	EN	
R: AT BE CH DE DK ES FR GB GR IT LI LU MC NL SE					
JP 06504063	W	19940512	(199423)		15
WO 9211040	A3	19921015	(199511)		
AU 665181	B	19951221	(199607)		
IL 100500	A	19961031	(199704)#		
IL 116602	A	19970218	(199720)#		
EP 563328	B1	19990630	(199930)	EN	
R: AT BE CH DE DK ES FR GB GR IT LI LU MC NL SE					
DE 69131401	E	19990805	(199937)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 5112595	A	US 1990-632285	19901221
EP 563328	A1	WO 1991-US9617	19911220
		EP 1992-904668	19911220
JP 06504063	W	WO 1991-US9617	19911220
		JP 1992-504375	19911220
WO 9211040	A3	WO 1991-US9617	19911220
AU 665181	B	AU 1992-11514	19911220
IL 100500	A	IL 1991-100500	19911225
IL 116602	A	IL 1991-116602	19911225
EP 563328	B1	WO 1991-US9617	19911220
		EP 1992-904668	19911220
DE 69131401	E	DE 1991-631401	19911220
		WO 1991-US9617	19911220
		EP 1992-904668	19911220

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 563328	A1 Based on	WO 9211040
JP 06504063	W Based on	WO 9211040
AU 665181	B Previous Publ.	AU 9211514
	Based on	WO 9211040
IL 116602	A Div ex	IL 100500
EP 563328	B1 Based on	WO 9211040
DE 69131401	E Based on	EP 563328
	Based on	WO 9211040

PRIORITY APPLN. INFO: US 1990-632285 19901221; US 1991-680446
 19910404; IL 1991-100500 19911225; IL
 1991-116602 19911225

AB US 5112595 A UPAB: 19931006

A myocardial imaging agent is claimed comprising a **technetium**
 (III) complex of formula (I) (each R1 and R2 = H, OH or 1-5C alkyl opt.
 substd. by OH, ether, ester, amide, ketone aldehyde or nitrile, X, Y = O

or S, each R3 = PR4R5R5, R4 = H, 1-5C alkyl, ether, 1-5C alkylaryl or 1-5C dioxanylalkyl, each R5 = 1-5C alkyl, ether, 1-5C alkylaryl or 1-5C dioxanylalkyl, n = 1 or 2).

Pref. (I) include trans-(1,2-bis(dihydro-2,2,5,5- tetramethyl-3(2H)-furanone-4- methyleneamino)ethane) bis (tris(3-methoxypropyl)phosphine)**technetium**-99m (III), (Ia) etc. (I) are pref. prepd. by reacting the tetradentate equatorial **ligands** with 99TcO4- followed by reaction with **stannous** chloride then the axial phosphine **ligands**.

USE/ADVANTAGE - (I) are used for myocardial imaging of humans to provide positive heart images for use in diagnosis. (I) provide high myocardial uptake and exceptionally rapid hepatobiliary clearance and extensive renal clearance to give sufficiently high heart/liver and heart/lung ratios to provide nearly ideal diagnostic myocardial images.
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L34 ANSWER 22 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
 ACCESSION NUMBER: 1992-182961 [22] WPIX
 CROSS REFERENCE: 1992-182962 [22]
 DOC. NO. NON-CPI: N1992-138112
 DOC. NO. CPI: C1992-083786
 TITLE: Kit for prepn. of **technetium** 99m myocardial imaging agent - comprising reducing agent, tetra dentate furanone- and furan thione-contg. **ligand** and protected phosphine **ligand**.
 DERWENT CLASS: B02 B03 K08 Q34
 INVENTOR(S): DEUTSCH, E A; DYSZLEWSKI, M M; NEUMANN, W L; WOULFE, S R; DYSZLEWSKI, M
 PATENT ASSIGNEE(S): (MLCW) MALLINCKRODT MEDICAL INC
 COUNTRY COUNT: 19
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 5112594	A	19920512	(199222)*		12
WO 9211040	A2	19920709	(199230)	EN	51
RW: AT BE CH DE DK ES FR GB GR IT LU MC NL SE					
W: AU CA JP					
AU 9211514	A	19920722	(199244)		
EP 563328	A1	19931006	(199340)	EN	
R: AT BE CH DE DK ES FR GB GR IT LI LU MC NL SE					
JP 06504063	W	19940512	(199423)		15
WO 9211040	A3	19921015	(199511)		
AU 665181	B	19951221	(199607)		
EP 563328	B1	19990630	(199930)	EN	
R: AT BE CH DE DK ES FR GB GR IT LI LU MC NL SE					
DE 69131401	E	19990805	(199937)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 5112594	A	US 1991-680446	19910404
WO 9211040	A2	WO 1991-US9617	19911220
AU 9211514	A	WO 1991-US9617	19911220
		AU 1992-11514	19911220
EP 563328	A1	WO 1991-US9617	19911220

JP 06504063	W	EP 1992-904668	19911220
		WO 1991-US9617	19911220
		JP 1992-504375	19911220
WO 9211040	A3	WO 1991-US9617	19911220
AU 665181	B	AU 1992-11514	19911220
EP 563328	B1	WO 1991-US9617	19911220
		EP 1992-904668	19911220
DE 69131401	E	DE 1991-631401	19911220
		WO 1991-US9617	19911220
		EP 1992-904668	19911220

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9211514	A	Based on	WO 9211040
EP 563328	A1	Based on	WO 9211040
JP 06504063	W	Based on	WO 9211040
AU 665181	B	Previous Publ.	AU 9211514
		Based on	WO 9211040
EP 563328	B1	Based on	WO 9211040
DE 69131401	E	Based on	EP 563328
		Based on	WO 9211040

PRIORITY APPLN. INFO: US 1990-632285 19901221; US 1991-680446
19910404

AB US 5112594 A UPAB: 19931006

A kit for prepg. a **technetium** 99m myocardial imaging agent is claimed comprising (a) a vial contg. a **lyophilised** pyrogen-free, sterile mixt. of a reducing agent and a **ligand** of formula (I) (each R1 and R2 = H, OH or 1-5C alkyl opt. substd. by OH, ether, ester, amide, ketone, aldehyde or nitrile, X, Y = O or S, n = 1 or 2) and (b) (i) a second vial contg. a **lyophilised**, pyrogen-free, sterile protected salt of a phosphine **ligand** of formula PR4R5R6 (II), (R4 = H, 1-5C alkyl, ether, 1-5C alkylaryl or 1-5C dioxanylalkyl, each R5 = 1-5C alkyl, ether, 1-5C alkylaryl or 1-5C dioxanylalkyl) or (ii) the vial further contg. a **lyophilised**, pyrogen-free, sterile protected salt of (II). (I) may be e.g. 1,2-bis-(dihydro-2,2,5,5-tetramethyl-3 (2H)-furanone -4-methyleneamino) ethane (Ia) or 1,2-bis(dihydro-2,2,5,5-tetramethyl-3 (2H)-furanthione-4-methyleneamino) ethane. (II) may be e.g. tris (3-methoxypropyl) phosphine (IIa) or tris(2-(2-(1,3-dioxanyl)) ethylphosphine. The protected salt of the phosphine **ligand** may be the phosphine salt bonded to e.g. HCl, H2SO4, iron (II), copper (I), ascorbic acid or zinc (II). The reducing agent may be e.g. **tin** chloride, ascorbic acid or copper (I).

USE/ADVANTAGE - (I) provide high myocardial uptake and exceptionally rapid hepatobiliary clearance and extensive renal clearance to give high heart/liver and heart/lung ratios to provide nearly ideal diagnostic myocardial images in humans.

L34 ANSWER 23 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 1990-361402 [48] WPIX
DOC. NO. CPI: C1990-157039
TITLE: Prodn. of radioactive **rhenium** compsns. - by reacting perrhenate with complexing and reducing agents.
DERWENT CLASS: B05 B06 K08
INVENTOR(S): PIPES, D W

PATENT ASSIGNEE(S): (MLCW) MALLINCKRODT INC; (MLCW) MALLINCKRODT MEDICAL INC
 COUNTRY COUNT: 17
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9013530	A	19901115	(199048)*		
RW: AT BE CH DE DK ES FR GB IT LU NL SE					
W: AU CA JP					
AU 9053554	A	19901129	(199109)		
US 5021235	A	19910604	(199125)		
EP 470965	A	19920219	(199208)		
R: AT BE CH DE ES FR GB IT LI LU NL SE					
JP 05500042	W	19930114	(199307)		5
US 5192526	A	19930309	(199312)		4
AU 646801	B	19940310	(199415)		
EP 470965	B1	19950628	(199530)	EN	6
R: AT BE CH DE DK ES FR GB IT LI LU NL SE					
DE 69020556	E	19950803	(199536)		
ES 2076363	T3	19951101	(199550)		
JP 3080984	B2	20000828	(200044)		5

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 5021235	A	US 1989-346411	19890502
EP 470965	A	EP 1990-905853	19900312
JP 05500042	W	JP 1990-505467	19900312
		WO 1990-US1323	19900312
US 5192526	A Div ex	US 1989-346411	19890502
		US 1991-673000	19910321
AU 646801	B	AU 1990-53554	19900312
EP 470965	B1	EP 1990-905853	19900312
		WO 1990-US1323	19900312
DE 69020556	E	DE 1990-620556	19900312
		EP 1990-905853	19900312
		WO 1990-US1323	19900312
ES 2076363	T3	EP 1990-905853	19900312
JP 3080984	B2	JP 1990-505467	19900312
		WO 1990-US1323	19900312

FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 05500042	W Based on	WO 9013530
US 5192526	A Div ex	US 5021235
AU 646801	B Previous Publ.	AU 9053554
	Based on	WO 9013530
EP 470965	B1 Based on	WO 9013530
DE 69020556	E Based on	EP 470965
	Based on	WO 9013530
ES 2076363	T3 Based on	EP 470965
JP 3080984	B2 Previous Publ.	JP 05500042
	Based on	WO 9013530

PRIORITY APPLN. INFO: US 1989-346411 19890502

AB WO 9013530 A UPAB: 19930928

Prodn. of radioactive **Re** compsns. is effected by (a) preparing a 0.005-2 mM aq. radioactive perrhenate soln., and (b) mixing the soln. with a 2nd soln. or freeze-dried solid contg. a complexing agent (I) and a reducing agent (II) to give a mixt. with a pH of 1.5-5.5. The 2nd soln. contains 0.01-0.15 M of (I) and 0.005-0.02 M of (II).

USE/ADVANTAGE - The compsns. are useful for diagnostic or therapeutic purposes. The **Re** is practically completely reduced and complexed using low concns. of (I) and (II), so that the compsns. can be administered directly without further purifcn. to remove excess (I) and (II).

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L34 ANSWER 24 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

ACCESSION NUMBER: 1990-304553 [40] WPIX

CROSS REFERENCE: 1990-156027 [20]

DOC. NO. NON-CPI: N1990-234106

DOC. NO. CPI: C1990-131525

TITLE: Kit for **technetium** 99M myocardial imaging agent
prepn. - comprising vials contg. tetra dentate
ligand-reducing agent and phosphine
ligand.

DERWENT CLASS: B02 B04 K08 Q34

INVENTOR(S): DEUTSCH, E A; LIBSON, K F

PATENT ASSIGNEE(S): (UYCI-N) UNIV OF CINCINNATI

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 4957728	A	19900918	(199040)*		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 4957728	A	US 1990-463403	19900111

PRIORITY APPLN. INFO: US 1989-354491 19890519; US 1990-463403
19900111

AB US 4957728 A UPAB: 19950102

Kit for prepg. a Technetium 99m myocardial imaging agent is claimed comprising (a) a first vial contg. a **lyophilised**, pyrogen-free, sterile mixt. of a reducing agent (e.g., **tin** chloride) and a **ligand** of formula (I) (R' , R'' = H, OH, 1-5C alkyl or 1-5C alkyl substd. by OH, ether, amide, ketone, aldehyde or nitrile gps.; R''' = 1-4C alkylene which is opt. substd. with OH, ether, amide, ketone, aldehyde or nitrile gps.), and (b) a second vial contg. a **lyophilised**, pyrogen-free, sterile protected salt of a phosphine **ligand** of formula PR₃R₄R₅ (II), (R_4 , R_5 = $-(CH_2)_x-C(CH_3)_2-(CH_2)_z-O-(CH_2)_y-CH_3$ or $-(CH_2)_x-O-(CH_2)_y-CH_3$; $x = 1-4$; $y = 0-4$; $z = 0-4$; R_3 = as for R_4 or R_5 or OCH₃ or 1-5C alkyl).

ADVANTAGE - 99mTc (III) complexes formed using the kit provide radiopharmaceuticals which neither hang up in the blood system nor the liver and yet bind to the heart for long periods (5 hrs.) to provide

useful positive human heart images. @ (5pp Dwg.No.0/0)
0/0

L34 ANSWER 25 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 1989-294546 [41] WPIX
CROSS REFERENCE: 1990-377940 [51]; 1991-088800 [13]; 1991-353908 [48];
1993-386207 [48]; 1994-262599 [32]; 1994-332836 [41]
DOC. NO. CPI: C1989-130430
TITLE: Direct radio-labelling of protein - by contacting with
radio-metal ions which tightly bind to pendant sulphydryl
gps. of protein in soln..
DERWENT CLASS: B04 K08
INVENTOR(S): HANSEN, H J; SHOCHAT, D; SUNDORO-WU, R; SUNDOROWU, R;
SCHOCHAT, D; WU, R S
PATENT ASSIGNEE(S): (IMMU-N) IMMUNOMEDICS INC
COUNTRY COUNT: 25
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 336678	A	19891011	(198941)*	EN	9
R: AT BE CH DE ES FR GB GR IT LI LU NL SE					
WO 8909405	A	19891005	(198942)	EN	
RW: AU BR DK FI JP KR NO					
ZA 8902342	A	19891227	(199005)		
AU 8936914	A	19891016	(199008)		
DK 9002353	A	19900928	(199106)		
NO 9004234	A	19901107	(199106)		
US 5061641	A	19911029	(199146)		
JP 03504858	W	19911024	(199149)		
IL 89795	A	19940826	(199435)		
EP 336678	B1	19951115	(199550)	EN	11
R: AT BE CH DE ES FR GB GR IT LI LU NL SE					
DE 68924795	E	19951221	(199605)		
ES 2078907	T3	19960101	(199608)		
US 5514363	A	19960507	(199624)		7
JP 2521168	B2	19960731	(199635)		8
IE 70588	B	19961211	(199705)		
CA 1340167	C	19981208	(199908)		
KR 151105	B1	19990515	(200052)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 336678	A	EP 1989-303270	19890403
ZA 8902342	A	ZA 1989-2342	19890330
US 5061641	A	US 1988-176421	19880401
JP 03504858	W	JP 1989-505808	19890329
IL 89795	A	IL 1989-89795	19890329
EP 336678	B1	EP 1989-303270	19890403
DE 68924795	E	DE 1989-624795	19890403
		EP 1989-303270	19890403
ES 2078907	T3	EP 1989-303270	19890403
US 5514363	A	US 1988-176421	19880401
	Cont of	US 1990-581913	19900913
	Cont of	US 1993-1419	19930107

JP 2521168	B2	JP 1989-505808	19890329
		WO 1989-US1217	19890329
IE 70588	B	IE 1989-1034	19890331
CA 1340167	C	CA 1989-594983	19890329
KR 151105	B1	WO 1989-US1217	19890329
		KR 1989-702248	19891201

FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 68924795	E Based on	EP 336678
ES 2078907	T3 Based on	EP 336678
US 5514363	A Cont of	US 5061641
JP 2521168	B2 Previous Publ. Based on	JP 03504858 WO 8909405

PRIORITY APPLN. INFO: US 1988-176421 19880401; US 1990-581913
19900913; US 1993-1419 19930107

AB EP 336678 A UPAB: 20001018

A method for direct radiolabelling of a protein comprises contacting a soln. of a protein contg. at least one pendant sulphhydryl gp. with a soln. of radiometal ions of a radionuclide which tightly binds to sulphhydryl gps. and recovering the resultant soln. of radiolabelled protein.

Also claimed is a radiometal-labelled protein comprising a protein contg. at least one pendant sulphhydryl gp. bound to a radiometal ion of a radionuclide that binds tightly to sulphhydryl gps., the radiometal ion also being bound to an exogenous ion which tightly binds to sulphhydryl gps.

Also claimed is a kit for radiolabelling a protein with **Tc** -99m comprising (a) a protein contg. at least one free sulphhydryl gp. and (b) a source of **stannous** ions for redn. of pertechnetate, e.g. **stannous** chloride or **stannous glucoheptonate**.

USE/ADVANTAGE - The method is used esp. for radiolabelling antibodies or antibody fragments and produces high yields of labelled prod. with minimal contamination with by-prods. The radiolabelled prod. can be used for e.g. antibody-targeted tumour imaging and therapy.
Dwg.0/0

L34 ANSWER 26 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 1988-292713 [41] WPIX
CROSS REFERENCE: 1990-147731 [19]; 1990-193274 [25]
DOC. NO. CPI: C1988-129790
TITLE: Labelling sulphhydryl-contg. antibody or fragment - using radio-metal, reducing agent and water-soluble **ligand** capable of complexing the radio-metal.
DERWENT CLASS: B04 B05 D16 E12 K08
INVENTOR(S): BUTTRAM, S; DEAN, R T; LISTER-JAMES, J; MATTIS, J A; PAK, K Y; LISTERJAME, J
PATENT ASSIGNEE(S): (CENZ) CENTOCOR INC; (CENZ) CENTOCOR CARDIOVASC
COUNTRY COUNT: 14
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 8807382	A	19881006 (198841)*	EN	73	
RW: AT BE CH DE FR GB IT LU NL SE					

W: JP
 EP 354923 A 19900221 (199008) EN
 R: AT BE CH DE FR GB IT LI LU NL SE
 JP 02504387 W 19901213 (199105)
 US 5053493 A 19911001 (199142)
 US 5177192 A 19930105 (199304) 10
 CA 1317544 C 19930511 (199324)
 EP 354923 B1 19940629 (199425) EN 29
 R: AT BE CH DE FR GB IT LI LU NL SE
 DE 3850497 G 19940804 (199430)
 US 5648471 A 19970715 (199734) 9

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 8807382	A	WO 1988-US1048	19880401
EP 354923	A	EP 1988-904758	19880401
JP 02504387	W	JP 1988-504358	19880401
US 5053493	A	US 1987-34003	19870402
US 5177192	A Cont of	US 1987-34003	19870402
		US 1990-600326	19901019
CA 1317544	C	CA 1988-563273	19880405
EP 354923	B1	EP 1988-904758	19880401
		WO 1988-US1048	19880401
DE 3850497	G	DE 1988-3850497	19880401
		EP 1988-904758	19880401
		WO 1988-US1048	19880401
US 5648471	A Cont of	US 1987-128328	19871203
		US 1991-666421	19910307

FILING DETAILS:

PATENT NO	KIND	PATENT NO
US 5177192	A Cont of	US 5053493
EP 354923	B1 Based on	WO 8807382
DE 3850497	G Based on	EP 354923
	Based on	WO 8807382

PRIORITY APPLN. INFO: US 1987-128328 19871203; US 1987-34003
 19870402; US 1990-600326 19901019; US
 1991-666421 19910307

AB WO 8807382 A UPAB: 19940817

A method of labelling a sulphydryl-contg. antibody (SCA) or fragment with a radiometal selected from **technetium-99m**, **rhennium-186**, **rhennium-188**, **rhennium-189** and **rhennium-191** comprises (a) forming a mixt. of (i) the radiometal and (ii) a reducing agent and a water-soluble **ligand** capable of complexing the radiometal to form a soluble radiometal-**ligand** complex and (b) contacting the mixt. with a SCA or fragment under conditions which permit transfer of the radiometal to the antibody or fragment to form a radiometal labelled antibody or fragment.

The water soluble **ligand** may be a cpd. of formula
 $R-(CHX)_m-(CR_1R_2)p-(CHY)_n-R_1$ (I). In (I) X, Y = OH or NH₂; R, R₁ = H, H, COOH or CH₂OH or R and R₁ together can form a ring or bi- or **multidentate ligand**; m, n = 0-10 such that m+n is at

least 2; R1, R2 = H, lower alkyl, substd. lower alkyl, aryl or lower alkylaryl or R1 and R2 together can complete a carbonyl gp; p = 0 or 1, provided that when p is 1, m and n are at least 1), e.g. saccharic acid, **glucoheptonic** acid, tartaric acid, galactaric acid or arabonic acid. The reducing agent is pref. a **stannous** reducing agent, e.g. **stannous** chloride.

USE/ADVANTAGE - The **technetium**-99m-labelled antibodies and fragments can be used for diagnostic purposes such as immunoscintigraphy of tumour, myocardial infarction, thromboses or bacterial abscess.

Rhenium-labelled antibodies can be used to selectively deliver a **rhenium** radioisotope in vivo for therapy, e.g. of cancer. The labelling method can be performed rapidly and yields a stable prod.

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Dwg.0/7

L34 ANSWER 27 OF 27 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
 ACCESSION NUMBER: 1982-59384E [28] WPIX
 TITLE: Complexes of denatured albumin and reducing metal - for labelling with **technetium**, useful in imaging the reticuloendothelial system.
 DERWENT CLASS: B04 K08
 INVENTOR(S): SAKLAD, E L
 PATENT ASSIGNEE(S): (NEWE-N) NEW ENGLAND NUCLEAR CORP
 COUNTRY COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 4337240	A	19820629	(198228)*		12

PRIORITY APPLN. INFO: US 1978-898292 19780420; US 1979-18312
 19790307

AB US 4337240 A UPAB: 19930915
 Compsn. (A) for labelling with 99mTc comprises complexes of denatured albumin, esp. human serum albumin, and a reducing agent, esp. **stannous tin**, and has a major portion at least of particles with size bwlow 0.2 micron, most particularly at least 85% of size 0.01-0.08 micron.

Pref. the reducing metal is stabilised by an additional **ligand**, esp. a phosphonate, phosphate, aminocarboxylate, polyhydroxy-carboxylate or polycarboxylate, best hydroxyethylene diphosphonate and methylene diphosphonate. The compsn. can also be stabilised with undenatured albumin and a buffer. The albumin is pref. denatured by heating at a pH 1.5-4.5 units different from its isoelectric point.

Also new are radioactive imaging compsns. consisting of (A) labelled with 99mTc.

The agents are useful for imaging the reticuloendothelial system, esp. the bone marrow, liver and lymph nodes. They can also be used to evaluate the rate of clearance of particulate material from the blood. (A) are stable when stored as **lyophilisate** and biodegradable. They require fewer components than sulphur colloids and do not require neutralisation, heating or other manipulations before use, other than addn. of the 99mTc pertechnetate soln.

Ceperley 10/053,612

February 27, 2004